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(VOL. I. FOR THE SESSION 1836-37.)

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BEING A

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OF

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THE

LONDON MEDICAL GAZETTE,

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Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 1, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

INTRODUCTORY LECTURE.

Gentlemen,—The subject of the course of lectures on which we are about to enter, is one which, for variety, interest, and importance, is second to none other taught in the schools. An assertion of this kind in the outset, may possibly risk the raising of expectations which it may not be so easy in the sequel to realize: but it is proper, at all hazards, that the fact should be fairly stated.

Definition.—Forensic medicine, in its literal sense, signifies medicine, or medical science, adapted to the *forum* or court of justice; but its actual import may be more largely described. As at present generally understood, it comprehends all that medical knowledge which is available for the ascertainment of facts required in the administration of justice, and that information which is requisite for the construction of certain laws. An unexceptionable definition cannot readily be given. I might quote to you the various forms in which the best authorities, both at home and abroad, have endeavoured to describe and to define the object of this study; but it would not be a very profitable mode of spending our time; the terms already employed may perhaps be deemed sufficiently clear and adequate for every purpose. As an art, forensic medicine assists in law-making as well as in the administration of the laws; it comes in aid of the legislator as well as of the judge; its mission, accordingly, must be considered as of no mean importance.

Other appellations.—The distinctive appellation of Forensic medicine—*medicina forensis*—has been sanctioned by Latin writers for more than a century, and has been freely adopted in various countries; particularly in Italy and Spain. As a synonym, Legal medicine—*medicina legalis, médecine légale*—is used principally by our French contemporaries, and is, perhaps, in some degree, a preferable term to that used among us, as more obviously implying an immediate relation to law. The Juridical or Judicial medicine of some authors, though it approach in signification to the *Gerichtliche Medicin, G. Arzneikunde, G. Arzneiwissenchaft*, of the Germans, cannot be considered as a very correct title; for medical men are never called on to declare what is or is not the law; their business in courts of justice is simply to ascertain facts whereby the law, as interpreted by the proper authorities, may be duly administered. But what shall we say of Medical jurisprudence?—an unfortunate misnomer, which has obtained a footing in this country, and which began to be employed before the subject it was intended to denote was rightly understood. Medical jurisprudence is synonymous, or identical, with medical law; using the term law in its ordinary sense of legal science. Now who shall say that medical law and legal medicine mean the same thing? Might we not as well assert that the chestnut-horse and the horse-chestnut are equivalent?

But whatever be the appellation we give this study—whether forensic, legal, or juridical medicine—its nature and objects are easy to be recognized. It ministers to certain necessities of man as a member of society, just as clinical medicine does to his wants as an individual. That the duty of the medical practitioner is not confined to the sick chamber has long been known: the medical man has also to attend the court of justice; and though the period is not far distant when medicine used to be defined simply and exclusively as the art of

curing or preventing disease, such a definition is now generally admitted to be incomplete, for it does not embrace the practitioner's duties in aid of the construction and administration of the laws.

History.—This, gentlemen, is no mere modern or new-fangled application of medical science; it is nearly as old as clinical medicine itself. It is not unreasonable to suppose that mankind possessed some degree of medical knowledge even before they were collected into communities: but it is not possible to believe that this event took place, and that laws were instituted for the governance of society, without the aid of some degree of medical skill in their formation, and some also in having them properly executed. A rapid glance at the history of forensic medicine will not here be out of place: it will show at how early a period medico-legal questions began to be entertained, also what sort of questions have principally occupied the attention of legislators and jurists, from the most ancient date up to the present time. But it were not possible (nor perhaps desirable, if possible) to enter largely into historical detail within the limits of an opening lecture: so that I shall have to refer you, for the principal facts and dates, to the Tabular View of the History and Literature of Forensic Medicine here drawn up for your inspection [see the Table subjoined to the lecture]. I have divided the whole series of events into two periods; in the first of which, the principles of the art may be recognized as existing, though not practised by a separate order of practitioners, or, indeed, by medical men at all, as was the case with clinical medicine itself in the beginning: the second period commences about the early part of the sixteenth century, when, by a special ordinance of the German Emperor, the intervention and assistance of medical witnesses, in certain specified cases occurring in courts of justice, were provided.

Period 1.—In relation to the first period I shall be very brief. We find, in the sacred books of Moses, the first written rudiments of forensic medicine. There are there stated certain distinctions to be observed with regard to wounds—homicide—violation—criminal abortion—diseases and disqualifications—the proofs of virginity, &c. founded on medical principles, and to be ascertained by the inquiries of persons competently skilled.

But the earliest special tract extant on a medico-legal subject is that of Galen, on the detection of persons who feign disease: this was produced in the second century of our æra *.

In the laws of the ancient Greeks and Romans there are many medico-legal provisions to be detected; yet, passing over several centuries, when we come to the great work of Justinian, the *Corpus Juris Civilis*, we are surprised to find in it no ordinance expressly requiring reference to be made to medical practitioners, and that, although the *medici* of the period were not an obscure nor an unprivileged class. The presence of midwives, indeed, was distinctly enjoined in executing the law *de ventre inspiciendo*; but there are several of the enactments which could not possibly be put in force with any regard to justice without the intervention of medical witnesses, — the *lex Aquilia*, for example, which ordered that damages should be paid for personal injuries,—and the *Lex Cornelia de sicariis et veneficis*, which took cognizance of homicide by weapons or poison.

It is a curious fact in the history of legislation, that at the very time Justinian in the East was intent on giving the world a body of laws that should concentrate all the civil wisdom of the age, the warlike nations in the north-western parts of Europe were engaged in a similar, but, of course, a far more rude, design. Before the election of the Merovingian kings, the most powerful tribe, that of the Franks, appointed four venerable chieftains to compose the Salic laws, and their labours were approved in three successive assemblies of the people. Somewhat later, the customs of the Ripuarians were transcribed and published; and the Visigoths were among the latest to secure for themselves one of the principal benefits of civilized society. The institutions of these untutored tribes have come down to us, and are found to contain several ordinances which must have given considerable latitude to medical authority in courts of justice. The capitularies also of Charlemagne, founded on the Salic and Ripuarian laws, are understood to go still further, and to render the evidence of medical men, in certain cases, indispensable. But the decretals of the Popes sanctioned a superior and more express discretion: in one of them, an ordinance of Innocent the Third, of the date 1209, it is distinctly provided that in a case of homicide by alleged wounds, there should be procured the testimony, or the judgment, rather, of experienced practitioners—*ut peritorum judicio medicorum talis percussio assereretur, &c.*, an expression, by the way, which corresponds with that of Baldus, the celebrated jurisconsult of Perugia, who, in his commentary on the Pandects has said, that medical men were no common witnesses—they had rather a *judgment* to deliver, than their simple testimony.

* See MEDICAL GAZETTE, vol. xvii. p. 989.

Period 2.—But I must hasten to the second period of our medico-legal history, marked by the famous ordinance of the Emperor Charles the Fifth. Various circumstances conspired to this important enactment: anatomy had now for some time been freely practised, and the superior value of medico-legal testimony, founded on the necroscopic appearances, had begun to be understood. Criminal codes had been drawn up by the bishops of Würtzburg and Bamberg, in which the importance of medical evidence was not overlooked. With such aids to its completion and success was the *Halsgerichtsordnung*, or grand criminal constitution of the empire, composed, and first published in the year 1533. I refer you to the historical table for the heads of the particular clauses which are of a medico-legal nature, only taking occasion here to observe, that by this ordinance, the presence of medical practitioners, in their respective grades, was secured in courts of justice, whenever their evidence was required for judicial purposes.

Legal medicine in France.—France followed the example of Germany: the reports and opinions of medical men were held to be indispensable in criminal processes relating to personal injuries, suspicious deaths, questionable suicides, &c.; and several French documents are extant, which were drawn up at a very early date in such circumstances. Ambrose Paré, that illustrious old surgeon, was decidedly the earliest writer of a treatise for the guidance of medico-legal practitioners. His book of Reports, some portions of which seem to have appeared as early as 1575, contains a variety of precepts and maxims relating to some of the most important questions in legal medicine. On wounds, as inflicted before or after death—on the signs of suffocation, particularly in infant children—on the proofs of virginity, with reference to defloration—on impotence—on lesions of the viscera, and on various kinds of death, there are many sound rules prescribed. But it was not in this book alone that Paré treated of medico-legal subjects: in several other parts of his works we find notices of a similar description. In his 24th book he mentions the signs of pregnancy; in the 25th he gives some curious instances of feigned disorders, and of the methods by which they were detected; and in his 21st book he lays down certain principles relating to poisons, in order, as he says expressly, that the surgeon might be enabled to distinguish by certain signs the proofs of poisoning, and to give a faithful report thereof to the judges when required so to do.

The ardour with which Forensic medicine has been pursued in France in later times, and the advanced state to which the study has been brought in connexion with the names of Louis, Chaussier, Foderé, Orfila, and others, are facts too well known to require dwelling on in this rapid sketch.

In Italy.—Italy may boast of having produced some of the earliest systematic writers on forensic medicine; and Baptista Codronchi, of Imola, is probably entitled in great measure to that precedence which has generally been awarded to his countryman Fedeli. Codronchi, in 1597, published at the Frankfort press, his tract entitled *Methodus testificandi*, in which, as he says himself, some very difficult but most interesting questions are treated: among these are feigned diseases, real maladies or injuries forming grounds of excuse or disqualification, suspected poisoning, wilful abortion, legitimacy, virginity, impotence, pregnancy, &c.; in short, his little book is a collection of medico-legal topics very remarkable for their date, though not discussed in any regular order. In his preface he speaks confidently, and, to all appearance, correctly, of his being the first to proceed in this track, and to set the example of a better kind of testimony than had been in use theretofore.

Five years later appeared the well-known work of Fortunato Fedeli, *De Relationibus Medicorum*, Palermo 1602, in which there is certainly a wider range of subjects than is found in Codronchi's treatise. But the author seems to have had no idea of having been anticipated by any one. With conscious pride he says *id equidem profiteri possum, similis argumenti opus nusquam antea quod sciam in lucem venisse.* Fedeli obtained quite as much reputation as he merited by this book, a book remarkable, no doubt, for the period in which it appeared; but considering the crude nature of its contents, the Aristotelic formality with which it is composed, and the superstitious errors with which it abounds, one cannot readily assign a reason for its continuing to be so long looked upon as an authority. It went through three or four editions, and seventy years after its first appearance was thought worthy of being re-produced by a learned professor of Leipsic.

But the great medico-legal luminary of the Italians was Paulo Zacchia, a man of great learning, singular talent, and sound judgment. He was the great authority of his day; and there has scarcely been a writer since on Forensic medicine, who has not, more or less, availed himself of the rich treasures of that amazing performance, the *Quæstiones Medico-legales* (1621—1651). As may readily be imagined, however, from the date at which it was produced — when the circulation of the blood had only recently been

announced to the world, this voluminous work abounds with matter which at present is of very little practical utility: anatomy, surgery, physiology, chemistry, and therapeutics, have all been greatly altered and reformed since it was written; and the digressions, poetical passages, quotations from old histories, samples of the Aristotelian philosophy and Galenism, which prevailed at that period, have rendered it now rather a source of recreation than of profitable research.

In Germany.—Germany, though the source and birth-place of Forensic medicine, and in later times so productive of great names in connexion with the study, yet seems to have done little or nothing in a systematic way till nearly a century after Italy. It was not totally idle, however, in cultivating particular branches of the subject. The hydrostatic test, for example, by which the question of the respiration of the new-born child, in reference to the charge of infanticide, is sought to be determined, was contrived in Germany towards the latter part of the seventeenth century. Carl Rayger suggested, and John Schreyer employed it for forensic purposes. Other performances likewise of the Germans, about this time, were fraught with utility: on wounds —on the proofs of homicide—on defloration—and on alleged sorcery, writings of considerable value were produced. But it was in the subsequent century that brilliant progress was made among the Germans in Forensic medicine: then it was that they attained that mastery which they still continue to hold. It would occupy more time than we can at present afford even to enumerate the labours of Bohn, Teichmeyer, Hebenstreit, Haller (for Haller taught Forensic medicine), Ploucquet, Daniel, Metzger, Platner, and a host of others, who contributed to raise the science to a degree of importance previously little to be anticipated. But we shall have ample opportunities of adverting to the peculiar services and merits of the German jurists hereafter.

In England.—When from this review of the progress of Forensic medicine on the continent, we turn our eyes to what has taken place in England at an early date, we find almost a complete blank—scarcely a trace of the least attention having been paid to it; and morbid anatomy itself in a deplorable degree of backwardness. When the young Prince Henry, the hope of the nation, died in 1607, and it was popularly believed for a time that he had been poisoned through the contrivances of the favourite Somerset, it became, of course, an object with the physicians who attended the Prince in his last illness to give a sufficient account of the appearances noticed after death. The pains taken to do this may be estimated from the steps adopted by Sir Theodore Mayerne, the first physician in ordinary to his Majesty, and in his time reckoned to be at the head of the profession. We find in his works a minute account of the last illness and death of Henry, drawn up both in French and Latin; to which is appended the certificate of the King and Lords in Council, attesting the satisfactory nature of the narrative, and acquitting Sir Theodore of all blame in the transaction. But the details of the *post-mortem* report are miserably meagre, and utterly unsatisfactory in a medico-legal point of view. It should be recollected that, at the time referred to, Harvey was pursuing those investigations which have since immortalized him, and shed so much glory on his country.

I must be permitted to dwell for a moment on the name of Harvey, which it is gratifying to be able to connect with the history of Forensic medicine in England. That illustrious man, however little motive there was in his time for attending to such observations, did not allow at least one physiological fact, bearing on a vitally important question of Forensic medicine, to escape him. It was known to Galen that the lungs of the fœtus were red, heavy, and dense, and that they afterwards became white, light, and of more delicate texture. Harvey, however, went much farther. The physician of Pergamus made no inference of medico-legal diagnosis; he did not even say that the change was produced *by* respiration; nay, he gives us to understand that the change in colour and texture is a sort of vital process that spontaneously takes place *preparatory* to the process of respiration. Now our great physiologist not only noticed the fact of change of colour in the fœtal lungs, but stated the true cause of the change, and suggested that this phenomenon might serve to distinguish whether the mother had brought forth still-born offspring, or issue that had breathed after birth.

The passage in which this remark occurs should be highly prized by English medical jurists. It will be found in the 70th Exercitation, *De Generatione Animalium*: — "In embryone hoc tempore dissecto," says Harvey, speaking of the fœtus that has completed the fifth month of intra-uterine life, "interiora omnia distincta et perfecta conspiciuntur: præsertim ventriculus, intestina, cor, renes, pulmones; qui etiam in lobos divisi sanguinolenti apparent, formamque debitam nacti sunt. Color autem his rubicundior est, quam iis qui aerem aliquando inspirarunt; quod pulmones, ab eo dilatati, al-

bedinem induant. *Eoque indicio facile internoveris, materne vivum, an mortuum fœtum pepererit:* illico enim ab inspirato aere, mutatur pulmonum color; qui, etiam post repentina fata, idem permanet."

The work from which this passage is taken was first published in 1651, and the fact which it announces was probably observed several years previously. Now the tests for infanticide did not begin to be inquired into, even in Germany, until nearly thirty years after the date just mentioned.

I must pass over a whole century from this time before I can find any thing else particularly deserving of notice in the proceedings of practitioners and writers in Great Britain. The two Hunters at length contribute indirectly to the study: John Hunter, by his researches relative to the treatment of the drowned; and William, by his embryology, and his remarks on the signs of child-murder; in which latter, however, he shews himself to be very imperfectly acquainted with the investigations of his predecessors and contemporaries. At the time that William Hunter stated his objections to the hydrostatic test, Haller and Morgagni had already pronounced their opinions upon it, had discussed the arguments *pro* and *con*, in respect to its value, and decided in its favour provided it were discreetly applied. Plouequet, also, and Daniel, had published their remarks on that test, and suggested others of their own in emendation of it; but Hunter seemed to know nothing of these things. In fact, though his tract on Child-murder is still referred to as an authority, particularly by members of the legal profession, its author, when it was produced, was nearly a century behind his time, for he stated not one medico-legal objection that had not been proposed and canvassed above at least 80 years before.

It was subsequent to the publication of Hunter's tract that the first systematic treatise on legal medicine was produced in this country. This was an abridged translation of Faselius's Elements, by Dr. Samuel Farr, which appeared in 1788,—the original work of Faselius being at that time above twenty years old! Yet such was the compendium which sufficed in England up to the present century, when a few elementary works began to make their appearance at intervals. Of late, indeed, there is not so much room to complain: we can even boast of having some very respectable treatises on Forensic medicine in our language. The late Dr. Gordon Smith produced works of considerable value, in his Principles, and his Analysis of Medical Evidence. Paris and Fonblanque contributed much to the advancement of the study, by their popular and interesting volumes; and Dr. Beck sent us from beyond the Atlantic a most important production, which has become naturalized amongst us—constituting, indeed, at present our best book of Elements, and one that is eminently serviceable to the medico-legal practitioner.

It is now more than thirty years since an event occurred which ought to have had, as, indeed, it has had, a considerable influence in the promotion of Forensic medicine in this country. Through a strong recommendation to Government, a professorship of Medical Jurisprudence and Police was founded in the University of Edinburgh, in 1803: but for several years after, though the chair was occupied by a very able professor (the late Dr. Duncan), little attention was paid to the subject: nor did the emoluments of the appointment much exceed the salary allowed by the crown. Of late, however, the study has been more successfully pursued, because patronized by authority; it has been enjoined in the curricula of several of our medical corporations: first in Edinburgh University partially; then, in 1829, in the College of Surgeons in Ireland; in 1830, by the Society of Apothecaries in London; and in 1831, by the College of Surgeons in Edinburgh. The London College of Physicians also, in their new curriculum, have adopted Forensic medicine; though, strangely enough, the London College of Surgeons have not yet thought proper to admit it, notwithstanding that it has become almost popularly and familiarly recognized as a department of the highest importance to the practitioner.

Indispensable to British practitioners.—The peculiar position in which medical practitioners in this country are placed, in respect to the legal tribunals, must necessarily lead to such a recognition; for there are not here—as there are in France, Italy, Germany, and other countries—persons specially appointed to the discharge of medico-legal functions; consequently, in the event of medical evidence being required amongst us, *any* practitioner in any manner connected with the case, or perhaps having no anterior cognizance of it whatever, may be called upon to act in the capacity of a medical jurist.

But our laws, perhaps it may be supposed, are of a different character from those of other countries: we do not here take cognizance of those minutiæ on which the decision of cases in the foreign courts depends. In other words, it may be attempted to be alleged that medical aid is not essentially necessary for the administration or composition of British law.

If such an assertion be seriously made, it can easily be shown to be inconsistent both with truth and fact. We have

only to appeal to the history of our laws—criminal, ecclesiastical, and civil—to see how the matter really stands.

The laws of England, like our language, may be traced to various sources; they are the concentrated wisdom, not only of our own ancestors, but of those of other and more ancient nations. Our civil and canon law, which prevails in the ecclesiastical and certain other courts, is almost wholly borrowed from the codes of Justinian and Theodosius, and from the Decretals of the Popes; while our common law, based on the enactments of our Ethelberts, our Alfreds, and our Edwards, has been enriched by the experience of ages, and may fairly lay claim to the designation which has by some been accorded to it—namely, that of being the perfection of human reason. Now the civil law, already noticed in speaking of the Corpus Juris and the Decretals, contains many provisions of a medico-legal nature: these provisions have, many of them, been transmitted to us in their original integrity; and I can give you, as an example, the practice followed when it is necessary to ascertain pregnancy, in the conduct of civil suits. The writ called, after the Roman law, *de ventre inspiciendo*, is issued, and a jury of discreet and experienced persons is called upon to execute it. In criminal cases, when pregnancy is pleaded in bar of execution, a jury of *matrons* must give a verdict on the plea: but the usual practice has for some time been to substitute certain professional examiners instead. I might refer to many of our ancient statutes in like manner, to show that they contain clauses, the administration of which can only be, as it commonly has been, properly effected by medico-legal assistance. Take the statute 25th of Edward III. c. 2, concerning the crime of high treason, in compassing or imagining the death of the king—violating certain females of the royal family—slaying the judges, &c. The application of this statute has rarely taken place, nor could it well be conducted, without medical evidence being tendered. Or take the laws of Mayhem, or maiming, which were very ancient, or the Coventry act, according to which the guilt of the accused depended on his having, with a certain intent, inflicted peculiar wounds—such as slitting the nose, cutting out or disabling the tongue or any member: medical evidence was here also absolutely necessary. It is certainly true, that in these, or any other of our laws, there has rarely, if ever, been any mention of medical referees. But this is only consistent with the cautious reserve so remarkable in our legislation, which always chooses to leave as much as possible to the discretionary management of its functionaries; nor is the necessity for medico-legal aid by any means lessened owing to that circumstance.

A better example of the cautious policy to which I allude cannot be afforded, than that which we find in the statute which I hold in my hands. It is the 9 Geo. IV. chap. 31, commonly called Lord Lansdowne's Act. It consists of thirty-eight sections, consolidating our statute law relative to offences against the person; and though full five-and-twenty of those sections are of a medico-legal nature, or requiring the evidence of medical witnesses, in order that the provisions of each should be duly satisfied, several of them requiring the substantiation of facts only to be ascertained by the examination of competent medical men, there is not one word, from beginning to end, explicitly referring to professional testimony: the nature of the proofs required, however, can leave no doubt as to the persons by whom those proofs are to be ascertained.

But the practice of our courts puts the matter beyond a question. Though there are among us no recognized medical jurists—no special class of medical referees—we find few trials in which persons discharging such functions are not specially required to be present, and called upon to elucidate, by their opinions, the difficulties that may arise. Observe the business on circuit: in almost all the cases occurring at the spring and summer assizes, the testimony of members of the profession is deemed of vital importance; the medical man seems to be the very hinge on which each case turns, the arbiter by whose decision the matter (frequently matter of life and death) is determined. Look, again, to that more ordinary and familiar court, the Coroner's—the important originator of further proceedings—where almost the entire business (with the exception, indeed, only of treasure trove, and wreck cases) consists of matter of medico-legal investigation. In few and rare instances can a Coroner's inquest be properly conducted without medical testimony; yet—and it is a good illustration of the non-intervention principle of our laws—though there are probably not less than five or six thousand inquests held by coroners annually, throughout the country, in almost every one of which medical evidence is indispensably required—it has been left entirely to the discretion of the coroner to procure that evidence; there is no medical man on whom he is specially authorized to call; he must exercise his ingenuity to obtain what he deems sufficient testimony, and has been frequently reduced to great difficulties in this respect, having had (until the passing of the new Medical Witnesses' Act) no remuneration to

offer to the professional man for the trouble of attending.

We thus see how, both by the construction of our law and the practice of its functionaries, we are all involved largely in the duty of aiding the furtherance of justice. There can be no evasion. The law requires the aidance of medical skill, that it may be duly administered, and that skill it may require at the hands of any practitioner in the kingdom. The legislature presumes *every* practitioner competent to act in a medico-legal capacity; nor may any medical man, however conscientious or scrupulous, excuse himself on the ground of his not being a medical jurist; when summoned, he must only make the best figure he can in exercise of the important functions demanded of him, or otherwise plead ignorance, and suffer accordingly in the public estimation.

Duties of medical jurists.—It is on most occasions a critical office to discharge well the duties of a medical jurist. Let us take a view of what is usually imposed on the practitioner, when called upon in this capacity. Suppose a case of alleged *poisoning* to be investigated, and that there is a party accused of that crime. The referee must in such a case bring to the investigation several requisites of a special sort. He must have a general knowledge of the effects of poisons: he must be able to distinguish the effects of poison from those of natural disease; he must be familiar with the morbid appearances produced by poison, and in nowise confound them with those resulting from other causes. By competent chemical skill he must be able to give convincing evidence of the particular deleterious substance wherewith the mischief has been done; and finally, he must be prepared to have his opinions and his processes strictly scrutinized, and to give a clear account of them *viva voce* before a legal tribunal.

Or, suppose another common case. The *body of a new-born infant is found* under suspicious circumstances. It will rest on the evidence of the professional examiner whether or not an indictment for murder shall be preferred against a suspected party. The competent medical jurist will in such a case proceed most cautiously and deliberately: he will examine the body, both externally and internally, with reference to several tests whereby the fact of live or still birth may be ascertained; and supposing the former to be made out, he will then endeavour to determine the cause of death. All the apparent lesions will have to be narrowly noticed; the appearances of disease or of wilful injury must be distinctly appreciated; the phenomena of asphyxia by drowning, strangling, and so forth, must be carefully discriminated; and any suspicious-looking fluids in the stomach or bowels must be chemically analyzed.

In most cases of alleged *unsoundness of mind*,—a subject of so much interest and importance both in our civil and criminal courts of justice,—the medical referee has the arduous task imposed upon him of stating publicly his deliberate opinions respecting the existence or non-existence of such a state of mind as is consistent with responsibility for imputed crime, or competency to the management of property. He must be able to distinguish the merely eccentric individual from the person of positively unsound mind: he must define, describe, and show himself acquainted with the peculiarities constituting the various kinds of mental alienation: and here again I need not add the perils that lie in wait for the professional witness who is not perfectly prepared for the task,—the misadventures that have occurred are matter of common notoriety.

So again with respect to *wounds* or other *personal injuries*, the skill of the medical jurist will often be exercised. The question may be as to the consequence of the alleged injury—whether, in case death has followed, such a result was to be considered as inevitable or accidental; and cases of this kind sometimes involve some of the most complicated inquiries.

Special education and discipline necessary.—Without a previous and an especial discipline in the inquiries relative to which he may have to appear in a court of justice, the medical witness must not be surprised to find himself in an awkward, if not a very dangerous, situation. Even the ablest practitioners,—men the most distinguished in particular departments of medical science,—have been foiled and humiliated when they have ventured unprepared to give medical evidence. The case of John Hunter will serve as an illustration. On the trial of Donellan, in 1781, for poisoning the young baronet, his brother-in-law, the great physiologist was summoned as a witness, being presumed to be well acquainted with the action of poisons on the animal economy. I shall not trouble you with the examination and cross-examination of Mr. Hunter, but the judge's remarks must not be omitted:—"For the prisoner," said his Lordship, "you have had one gentleman called, who is likewise of the faculty, and a very able man. I can hardly say what his opinion is, for he does not seem to have formed any opinion at all of the matter. He at first said he could not form an opinion whether the death was or was not occasioned by the poison, because he could conceive that it might be

ascribed to other causes. I wished very much to have got a direct answer from Mr. Hunter, if I could, what upon the whole was the result of his attention and application to the subject, and what was his present opinion, but he says he can say nothing decisive."

I am aware that attempts have been made by some of the ardent admirers of John Hunter to defend the evidence he gave on this trial; but there is reason to believe that this is more than that eminent man himself ever ventured to do. On the contrary, he seems to have ever retained an unpleasant consciousness of the uncreditable figure he made on the occasion, and to have regretted that he had not previously taken the trouble to make himself better acquainted with the points on which he was examined. The candour, indeed, which he displayed subsequently, ought to go far towards disarming censure, while it conveys to us a lesson not to be lightly prized. He used ever to lament, as we are informed by Sir Astley Cooper, that he had not made more preparation for this trial: "he found himself a good deal embarrassed on the occasion; the lawyers took advantage of his embarrassment, and he used to express his regret publicly in his lectures, that he had not given more attention to the subject, before he ventured to give an opinion in a court of justice." This regret on the part of Mr. Hunter must have been purely for having so perilously risked his reputation, and at the same time so little served the cause of truth; for if he *had* given the requisite attention to the subject, he could only have come to the same conclusion as the other witnesses.

Let me be permitted to give one other example. If the most distinguished ability as a teacher of anatomy could constitute all that was requisite for a medical jurist, this was to be found in the late Mr. Joshua Brookes. Yet some circumstances which occurred in the spring of the year 1829, put his qualifications in this respect to the test. An elderly gentleman, a Mr. Neale, was found dead on the floor of his chamber; and a soldier, who had been with him the evening before, and who, there was reason to believe, had robbed him, was suspected to have been the cause of his death. The question was, whether the deceased had died a natural death,—as by apoplexy, for instance,—or had been murdered. The body was examined by Mr. Brookes, and an account of the appearances, signed by him and two other medical gentlemen, submitted to the coroner and his jury. A more unsatisfactory document cannot well be conceived issuing from men of medical education: it was, however, sufficient to lead to a verdict of *wilful murder* against the soldier. But the transaction had caught the attention of the public, and luckily, also, of some well-informed members of our profession. The matter was taken up by the medical societies of the metropolis, and discussed in the journals, promptly and impartially*. Mr. Brookes had time to reconsider the circumstances of the case: he was examined again, a week after, at the Old Bailey, when the evidence he gave was directly the reverse of what he had previously given, and in consequence the prisoner was *acquitted*. It was creditable, no doubt, to Mr. Brookes to unsay what he had said before, when he became convinced of his error: but consider the appearance of all this before the public, — consider the jeopardy in which truth and justice were placed,—and what might not have been the result had there been no opportunity of retracting the original statement!

We see, then, that however the magistrate or the judge may presume medical men in general, and the more eminent among them in particular, competent to the business of forensic medicine, practitioners themselves may not so safely form the same opinion, unless they be fully conscious of sufficient preparation.

Necessity for a distinct course. — But how is that preparation to be effected? May it be attained in the course of the ordinary education for clinical practice? It is not very possible nor probable that it should. In the departments of practical medicine, surgery, midwifery, chemistry, anatomy, and materia medica, much information may undoubtedly be gathered which shall afterwards serve in the investigation of wounds, pregnancy, poisoning, and other subjects of Forensic medicine; but the special application of those branches can scarcely be expected to be entered upon by their teachers, who have already quite enough on their hands. Or if one or two of them should find time for such application, the others certainly cannot: while at all events the student is sent about gathering his medico-legal principles. There is no other feasible means save making this department of knowledge a special study,—a study which is to succeed to the student's attendance on the other branches of medical education, making this the complement and the completion of them all. There is even a positive necessity for such a course, because many of the subjects comprehended within the range of Forensic medicine are not treated of elsewhere.

Extent and variety of Forensic medicine.—If we advert to the extent and variety of topics which come within the province of

* See MEDICAL GAZETTE, vol. iii. p. 578.

legal medicine, it is impossible not to be struck with the changes which some of these have undergone in course of time, some having become immeasureably lowered in the scale of relative importance, and others absolutely extinct. To give one instance: time was when *Demonology* and *Witchcraft* were prime objects of attention to the bar, the bench, and the medical profession, in this country. Some of our ablest judges were persuaded that supernatural powers of mischief were possessed by certain persons in the lower classes of society, and that they were often exercised with malicious intentions and fatal effect. The character of Sir Matthew Hale is stained by such a weakness: this great man tried prisoners who were arraigned on the charge of witchcraft; and on one occasion fortified his impressions of their guilt by appealing to one of the most learned physicians of the day, Sir Thomas Browne, who happened to be in court. It is lamentable to add, that the infatuated opinion then uttered, cost two unfortunate women their lives.

In Catholic countries, and where religious fanaticism much prevails, questions of alleged *miracles* often come before the authorities. Hence the consideration of miracles is still entertained by certain foreign medico-legal writers. In the work of Zacchia, we find that the first consultation in which that distinguished jurist was engaged before the Rota, was to determine whether or not the removal of epilepsy, in a certain case, was to be attributed as an instance of miraculous power to a reputed saint, whom it was intended to canonize? Tortosa, who belongs to the present century, devotes special chapters to miracles, magic, and the possessed; and Martini, one of the most eminent Italian professors of the present day, does much the same. In his *Medicina Forensis*, published so late as 1832, he treats of miracles, demoniacs, sorcerers, witches, and the bewitched. On the *debitum conjugale*, also, Martini gravely devotes a chapter to an enumeration of the circumstances under which the debtor may be occasionally excused.

If from these and similar inquiries the present advanced state of civilization in this country has wholly delivered us, it may still be doubted whether, upon that account, the circle of our medico-legal research is much contracted: the progress of knowledge, keeping pace with social improvement, has given rise to several other subjects of investigation, not less curious, perhaps, while they have far more serious claims on our attention. Toxicology may be cited as an example—a department of medical science which can scarcely be said to have originated anterior to the present century: the subtlety of research, however, and the accuracy of the conclusions which Forensic Medicine can boast of, in connexion with this department, have already attained a perfection, which it would have been deemed by the medical jurists of the generation gone by, chimerical, if not preposterous, to hope for.

Conclusion.—I find that I must here conclude, though a number of interesting points would still deserve to be noticed. But perhaps all has been said that was absolutely essential for an opening lecture. It was my purpose to give a succinct account of the nature and the importance of Forensic medicine; and I have done this, or attempted to do it, chiefly by tracing the art from its origin. In the rapid and necessarily superficial sketch presented to you, it may be discerned at how very early a date of human society this application of medical knowledge was found requisite, and from its progress, it may be inferred how much the widely extending relations of society will in future render its assistance still more and more needed. On the actual prowess—the triumphs—of legal medicine, I have dwelt but little, partly because the details can be better appreciated as we proceed in the course, and partly because, to say the truth, though there are bright and beautiful tints in the picture, there are also dark spots—deplorable blemishes. I might bring before you instances in which medical men, by the conscientious and able discharge of their duty as professional witnesses, have vindicated the purity and honour of persons unjustly charged with crime, have rescued the innocent from impending ruin, and by detecting guilt in its most secret recesses, have brought the criminal to deserved punishment. But it would be to abuse your good faith, were I, at the same time, to withhold examples of quite an opposite description, and to omit to mention in how many instances great opportunities have been lost, positive and irretrievable mischief has been done, by incompetent or reckless medical referees. That upon weighing the good against the bad, the former should be found considerably to preponderate, is gratifying as it is certain; but it would be unjustifiable hence to insinuate that the bad instances are weightless, or only as a feather in the scale. It is but too true, nor can it be too early impressed on those entering upon the study, that the practice of legal medicine involves a heavy responsibility, and that it is attended with anxieties and difficulties which do not usually fall to the lot of the ordinary practitioner. The consolation, however, is, that if the danger be great, the glory is not incommensurate, and that, in the very endeavour to achieve success, we may hope to obtain that most enviable of all prizes—the respect and approbation of our fellow citizens.

[*Tabular View, &c.*

TABULAR VIEW

OF THE

HISTORY AND LITERATURE OF FORENSIC MEDICINE.

PERIOD I.

In which the Principles existed and were recognized without a distinct order of Practitioners.

From the earliest Date to the Sixteenth Century.

ASSYRIANS AND EGYPTIANS.

B.C. (2000) The custom of exposing the sick publicly (*Herod.* i. 197, and *Strabo*,) must have led to many observations of a medico-legal kind. In Egypt, the kings themselves practised dissection, in order to discover the cause of death (*Plin.* xix. 26.) Pregnant women were respited from punishment.

HEBREWS.

1722 The midwife who attended Tamar (*Gen.* xxxviii. 28) exercised a proper medico-legal discretion.

1604 Shiphrah and Puah consulted by the king of Egypt respecting infanticide, as a measure of state policy (*Exod.* i. 15.)

1451 MOSES issues several medico-legal ordinances for investigating questions of homicide, the nature of wounds, violation, virginity, personal disqualifications, &c.: in fact, the chapters in the Pentateuch, on these subjects, contain the first written rudiments of forensic medicine.

GREEKS.

884 Lycurgus ordains that the destruction of infants be regulated by certain persons, appointed to determine the question of weakliness or deformity.

536 Pythagoras; embryology—climacteric years.

430 Democritus; signs of defloration—signs of death.

400 HIPPOCRATES, in various parts of his writings, touches on medico-legal subjects, particularly on seven and eight months' births, on superfœtation, &c.

325 Aristotle, in his *Hist. Animal.* (vii. 4, &c.) states the doctrine of uncertain length of gestation in the human female; signs of pregnancy, &c.

300 Theophrastus, on poisons: author of the celebrated work on Characters.

ROMANS.

B.C.

680 Numa ordains that the cæsarean operation be performed on women who have died pregnant of a *living* fœtus.

451 The *lex talionis*, one of the laws of the Twelve Tables, implies a certain kind of medical knowledge for its due administration.

(350) The *jus honorarium* gave a discretionary power (medico-legal?) of levying damages in proportion to the injury.

330 Case of extensive poisoning by Roman matrons; above 150 of them punished.

60 Cicero (*pro A. Cluentio*, and *ad Herenn.*) alludes to the signs of poisoning commonly noticed on the dead body.

44 Julius Cæsar assassinated; medico-legal opinion of Antistius, that one wound alone, of the three-and-twenty, was mortal.

A.D.

19 Germanicus dies, as it is supposed, from poison: the appearances about the body favour the popular supposition.—(*Sueton. Calig.* 1.)

54 Agrippina, with Locusta's assistance, procures several deaths by poison.—(*Tacit. Ann.*)

75 Quintilian mentions the necessary proofs of poisoning (*Declam.* xv.) Pliny the elder, also, and Seneca, touch on the same subject.

180 GALEN—the first who wrote expressly on a medico-legal subject—on *Feigned Diseases*, and the means of detecting them. He also noticed the change produced in the fœtal lungs at birth—the vitality of seven months' and the mortality of eight months' births—the signs of poisoning, and some circumstances connected with legitimacy.

WESTERN EMPIRE.

438 The Theodosian Code compiled: its enactments remain in force for a time.

FRANKS AND VISIGOTHS.

450 The Salic and Ripuarian laws (enacted between A.D. 422 and 490) contain several provisions, requiring medico-legal assistance for putting them in practice: thus, in cases of wounds, homicide, poisoning, and the like, punishment was inflicted, or pecuniary penalties assessed, according to the amount of crime in the guilty party, which was ascertained in some instances by a *sectio vulnerum*.

EASTERN EMPIRE.

A.D.

534 Justinian's great work, the *Corpus Juris Civilis*, completed. It contains many laws based on medical principles, some of them expressly "on the authority of Hippocrates." The *lex Aquilia*, and *lex Cornelia de sicariis et veneficis*, also the principles laid down respecting retarded births and superfœtation, and more especially the enactment *de ventre inspiciendo, et de custodiendo partu*, require medical aid for their administration; in the latter enactment, the presence of midwives is enjoined, if necessary.

The *Corpus Juris*, however, in the course of a few centuries, became obsolete, and had fallen into total oblivion in the West, when a copy of the Digest was accidentally found at Amalfi in the year 1137: upon this event, all at once the Civil Law met with universal acceptance throughout Europe, and commentators began to abound.

GERMAN EMPIRE.

A. D.

790 Charlemagne, improving on the laws of the Franks, enacts his *Capitularies*, several of which virtually require the intervention of medical assessors.

JURISDICTION OF THE CHURCH.

1151 The *Decretals*, or body of Canon Law, reduced to order by Gratian the Monk. They receive successive additions for some centuries. Among them are many enactments, in which the necessity of medico-legal interference is plainly implied.

1209 Innocent III. decrees that in a case of homicide by wounds, medical evidence, or, as it is expressed, *judicium peritorum medicorum*, shall be obtained, for the better administration of justice.

ARABIANS.

A.D.

932 Rhases (Arrhasi) of Bagdad—the most original of the Arabian writers—treats of medical impostors, and the means of detecting them; on poisons also. His chief work, *Elchavi*, or the Continent.

1036 Avicenna (Ebn Sina); the most famous of the physicians of the East, accounted another Galen, and celebrated for his sagacity.

1140 Avenzoar (Ebn Zohr) of Seville; touches on the subject of impotence, &c.

1206 Averrhoes (Ebn Roschd) of Cordova.

GERMANY AND ITALY.

1238 The Emperor Frederic II. issues some ordinances of a medico-legal character; patronizes the schools of Italy; and sanctions the occasional practice of human anatomy.

1315 Mondini de Luzzi dissects publicly the bodies of two women at Bologna. This may be considered as the era of the commencement of practical forensic medicine. Mondini publishes a treatise on descriptive anatomy, illustrated with woodcuts.

1370 Baldus de Ubaldis, in his Commentary on the *Pandects*, points out the superiority of medical evidence. Medical men, he says, are no common witnesses—*proprie non sunt testes, sed est magis judicium quam testimonium.*—(*Digest.* ii. *Tit.* 12.)

1492 Santes Ardoyni, and Cardinal Ponzetti, write on poisons: the work of the former is very complete for the time in which it was composed: the morbid appearances produced by poisons are said to be described in it from actual observation.

1503 Death of Pope Alexander VI. by poison; his son, Cæsar Borgia, escapes.

1502 The Bishop of Würtzburg's *Ordinances*.

1507 The Bishop of Bamberg's *Criminal Constitutions*. Both these codes were revised, and incorporated in the Const. Crim. Carolina, presently to be noticed.

FRANCE.

A.D.

1374 The University of Montpellier procures leave to dissect human bodies, for instruction in anatomy.

1418 Valescus de Tharanta treats of poisons.

PERIOD II.

In which Forensic Medicine becomes a distinct Profession, practised in several countries by a special order of Medical Men.

From the year 1533 to the present time.

GERMANY.

1533 The Emperor Charles V. promulgates the great Criminal Code of the Empire—the *Constitutio Criminalis Carolina*,—certain articles of which expressly enjoin the magistrates to call in medical persons to give their evidence touching questions at issue. Thus, *Arts.* 35 and 36 relate to concealed delivery and child-murder, and ordain that the evidence of midwives and physicians shall be procured in such cases; *Art.* 147 is on wounds proving mortal, regarding which surgeons and other skilful persons are to decide whether death ensued in consequence of the injury; *Art.* 33 relates to assassination; *Art.* 37 restricts and regulates the sale of poisons; *Art.* 44 relates to witchcraft; *Art.* 59 provides a mitigation of the torture in the case of feeble persons; *Art.* 119, on the crime of violation; *Art.* 109, on magic; Art. 130, on poisoning, and its punishment; *Art.* 131, the question of live or still birth, with reference to concealed delivery; *Art.* 133, on criminal abortion, making a distinction in the crime, according as the fœtus is *quick* or *not*; *Art.* 135 relates to suicide, whether effected with design of escaping punishment, or in insanity; *Art.* 134, the responsibility of physicians killing their patients; *Arts.* 149 and 164 authorize medico-legal inspection of the dead body before burial, in cases of suspected homicide; and *Arts.* 179 and 219 point out how the proofs of unsound mind are to be ascertained in questionable cases. The chief parts of this celebrated Code have been adopted by most of the Continental states in reforming or revising their Statute-books. It now only remains to give a list of the principal persons who have distinguished themselves in connexion with Forensic Medicine.

1564 Wier; witchcraft, hymen, &c.

1594 Libavius; bleeding of the corpse in presence of the murderer.

1638 Sebiz; wounds, virginity.

1663 Bartholin; observes the phenomenon of the lungs of the still-born sinking, while other lungs float in water.

1667 Swammerdam explains why this is so.

1677 Rayger proposes the hydrostatic test.

1682 Schreyer actually practises the test for judicial purposes.

1691 Zeller writes against the test; and some of the faculties declare against it,—some, however, for it.

1701 Ammann; *Praxis vuln. lethal.*

1701 Valentin; *Pandectæ medico-legales.*

1704 Bohn; *De officio medici, clin. et forensis;* on wounds, the test of infanticide, &c.

1704 Becker; on death by drowning—*sine pota aqua.*

1706 Zittman; *Med. forensis, h. e. responsa, &c.*

1720 Schurig; *Spermatologia, Gynæcol. &c.*

1722 Teichmeyer; *Instit. med. legalis vel for.*

1723 Goelicke; *Medicina forensis.*

1725 Alberti; *Systema jurisp. medicæ.*

1731 Richter; *Digesta med. s. decisiones.*

1733 Troppaneger; *Decisiones med. for.*

1736 Hoffman; on poisons, wounds, &c.

1746 Eschenbach; *Med. legalis brev. thesibus.*

1753 Hebenstreit; *Anthropologia forensis.*

1756	Boerner; *Instit. med. leg.*
1767	Faselius; *Elem. med. forens.*
1768	Kannegiesser; *Instit. med. leg.*
1775	Daniel (sen.); *Samm. med. gutacht.*
1777	Ploucquet; *Abhandl. üb. todesarten.*
——	Camper; on infanticide.
1778	Baumer; *Med. forens.*
1780	Daniel (jun.); *Comment.*; 1784, *Bibl. staats.*
1781	Plenk; *Elem. med. et. chir. forens.*
1782	Haller; *Vorlesungen* (posthumous.)
1782--4	Uden and Pyl; *Magazin f. d. ger. aw.*
1785--91	Schlegel; *Collectio opuscul.*
1793	Metzger; *Kurzgef. system ger. arzn.*
——	Loder; *Anfangsgründe d. staats.*
1795	Fahner; *Volständ. syst. d. ger. aw.*
1796	Müller; *Entwurf d. ger. aw.*
1802	Schraud; *Elementa med. forens.*
——	Roose; *Grundriss med. ger. vorlesungen.*
1804	Schmidtmüller; *Handbuch d. staatsarzn.*
1808	Knape and Hecker; *Krit. jahrb. d. staats.*
1810	Masius; *Lehrbuch d. ger. ak.*
1812	Henke; *Lehrb. d. ger. med.*; 1816, *Abhandl.*
——	Wildberg; *Handbuch*; 1824, *Lehrbuch.*
1813	Bernt; *Systemat. handb. d. ger. ak.*
1814	Klose; *System. d. ger. physik.*
1816	Sprengel; *Instit. med. forens.*
1817	Platner; *Quæstiones med. forens.*
1819	Mende; *Ausführliches Handb. d. ger. med.*
1821	Meckel; *Lehrb. d. ger. med.*
——	Henke; *Zeitschrift für. d. staats.*
1827	Niemann; *Taschenbuch d. ger. aw.*
1828	Klug; *Auswahl med. ger. gutachten.*
1831	Wildberg; *Magazin f. d. ger. aw.*
1833	Bischoff; *Merkwürd. crim-rechts-fälle.*
1835	Joerg; *Fœtuslunge in geborn. kinde.*
1836	Schneider & Schürmayer; *Ann. d. ges. staats.*

FRANCE.

1582	Ambrose Paré; *Rapports*—impostors—poisons—wounds—suffocation, &c. The earliest writer after the C. C. C.
1589	Pigray; saves fourteen persons who were condemned as witches.
1598	Pineau; signs of virginity.
1606	Henry IV. appoints one or two surgeon-jurists for every town in France.
1611	Tagereau; impotence.
1651	Gendry; *Moyens de rapporter.*
1677	*Actual congress abolished.*
1684	Blegny; *Doctrine des rapports.*
1704	Devaux; *l'Art de faire les rapports.*
1740	Bruhier; *l'Incertitude des signes de la mort.*
1750	Petit; retarded births, &c.
1763	Louis; hanging, drowning, signs of death, &c.
1789	Chaussier; *Observations chirurg. lég.*
1799	Foderé; *les Lois éclairées.*
1801	Belloc; *Cours de méd. légale.*
1801	Mahon; *Médecine légale, et Pol. méd.*
1805	Vigné; *la Médecine légale.* [additions.)
1808	Marc; *Autopsie cadaverique* (Rose, with
1813	Foderé; *Traité de méd. légale.*
1813	Ballard; *Principes de med. légale* (Metzger, with notes.)
1819	Lecieux, &c. (Chaussier,) *Quatre thèses.*
1821	Biessy; *Manuel de méd. légale.*
——	Briand; *Manuel de méd. légale.*
——	Capuron; *Méd. lég. des accouch.*
1823	Orfila; *Leçons de méd. lég.—Toxicol.* &c.
——	Esquirol; strangulation, insanity, &c.
1824	Chaussier; *Recueil de mémoires.*
1829	Leuret, Marc, &c. (*Ann. d'hyg. et de méd. lég.*)
1830	Sedillot; *Manuel de méd. lég.*
1833	Velpeau; *Embryologie.*
1834	Trebuchet; *Jurispr. de la médecine.*
1835	Brierre de Boismont; *Manuel de méd. lég.*
1836	Devergie; *Méd. lég. théoret. et pratique.*

ITALY

1597	Codronchi; *Methodus testificandi*—feigned diseases, wounds, &c.
1602	Fortunato Fedeli; the first systematic writer—*De relationibus medicorum.*
1616	Liceti; on monsters, &c.
1621	Zacchia; *Quæstiones med. leg.*: first complete edition in 1651.
1761	Morgagni; *De sedib. et caus. morborum.*
1780	Testa; *Della morte apparente.*
1789	Caccia; *Osservaz. medico-legali.*
1801	Tortosa; *Instituzioni di med. for.*
1806	Celoni; *Chirurgia forense.*
1806	Sidoti; *Medicina forense.*
1811	Bene; *Elementa medic. forens.*
1818	Barzelotti; *Medicina legale.*
1819	Zacintho; *Reflessioni med.-legale.*
1822	Grottanelli; *Ricerche medico-forense.*
1832	Martini; *Elementa med. for.* &c.

SPAIN.

1795	Vidal; *Cirurgia for. o arte do hacer relac.*
1796	Del Valle; *Cirurgia forense gen. y partic.*

GREAT BRITAIN.

1650	Harvey; notices the effects of respiration on the colour of the lungs.
1664	Charleton; *Disquisit. anatom. physicæ*; death by lightning.
1671	*Coventry Act* (22 Ch. II. c. 1.)
1702	Mead; *Poisons.*
1735	Prosecutions for witchcraft abolished (9 Geo. II. c. 5.)
1776	Hunter, J.; on death by drowning.
1783	Hunter, W.; on signs of child-murder.
1788	Farr; *Elements med. jurisp.*
1793	Baillie; *Morbid anatomy.*
1800	Johnston; *Med. jurisp. on madness.*
1803	*Ellenborough Act* (43 Geo. III. c. 58.)
1803	Percival; *Medical ethics.*
——	A Professorship of Med. Jurisp. and Police instituted in the Univ. Edinb.
1805	Duncan, &c. (*Edinb. med. and surg. journ.*)
1815	Bartley; *Treatise for. med.*
1816	Male; *Epitome jurid. or for. med.*
1817	Haslam; *Med. jurisp. of insanity.*
1821	Gordon Smith; *Principles forens. med.*
1823	Paris and Fonblanque; *Med. jurisp.*
1825	Beck; *Elem. med. jurisp.* 1st Engl. edit.
1828	*Lansdowne Act* (9 Geo. IV. c. 31.)
1829	Forsyth; *Synopsis med. jurisp.*
1830	Regulation for attendance of medico-legal lectures adopted by Soc. of Apoth. and Coll. Surg. Edinb.
1831	Amos; *Lect. med. jurisp.* (Med. Gaz.)
1832	Ryan; *Manual med. jurisp.*
1834	Chitty; *Treatise med. jurisp.*
1836	Taylor; *Elem. med. jurisp.*

OBSERVATIONS

ON THE

TREATMENT OF VASCULAR NÆVI MATERNI.

By E. A. Lloyd,

Assistant-Surgeon to St. Bartholomew's Hospital, Surgeon to Christ's Hospital, &c.

The disease termed vascular nævus maternus is, I believe, as its name would imply, always a congenital affection: at all events, I never met with a morbid structure of precisely similar character, which had commenced after birth; not that I know of any reason why such a case should not occur. Such nævi, however, at the time of birth, are almost uniformly of small size,—so small as in some instances nearly to escape detection; and even at this period they are remarkable for their extreme vascularity; in fact it is that chiefly which renders them distinguishable. But those which at birth are mere specks, as it were, sometimes become in the course of a few weeks, or even days, of considerable bulk, so as to constitute a formidable disease. They are liable to extend in every direction; and the larger the size they have acquired, the more are they likely to increase. I have many times seen them projecting as much on the inner as on the outer surface of the cheeks, lips, and eye-lids; and in more instances than one I have observed the bones of the head and face implicated in the disease. They have also been met with occupying a large portion of a limb, and extending deeply between the muscles. Mr. Langstaff removed (after death) the leg of a child affected with disease of this kind: he afterwards injected it, and, on dissection, found large portions of the diseased structure situated beneath the adipose membrane, and implicating in a greater or less degree the fascia and several of the muscles. A child about three months old, in the hospital, under Mr. Abernethy's care, died from hæmorrhage arising from a large nævus in a state of ulceration, which occupied the front and a considerable portion of one side of the face, and which, at the period of birth, was very little larger than a pin's head.

It is therefore of great consequence to subject such cases to treatment at an early period; and certainly not a moment should be lost as soon as they are observed to be increasing. Moreover, as a surgical operation is generally required for the cure of the disease, and as such operations, when performed on very young children, are always attended with more or less danger, it is important that in every case the operation should be as simple and little painful as possible. In effecting the cure it is also desirable that means should be employed by which the least degree of deformity will be produced, and especially if the head, face, neck, or arms, be the seat of the disease. To point out means by which these objects may be, in my opinion, most effectually attained, is the purpose of this communication.

When any of the ordinary modes of treatment are employed for the removal of nævi of large size, very serious consequences sometimes ensue. If the diseased structure be excised, very profuse, and in some cases fatal, hæmorrhage takes place. Mr. Lawrence states, in a paper published in the thirteenth volume of the Transactions of the Royal Medical and Chirurgical Society, part ii., page 422—"The profuse bleeding attendent on the removal by the knife of even small nævi, is often alarming, and certainly dangerous, in the young patients who are the most frequent subjects of the operation." An infant who was born with a large nævus, which was excised by Mr. Wardrop, expired from the profuse bleeding which took place during the operation.

Speaking of the destruction of nævi by caustic, Mr. Lawrence observes—"It would probably be as dangerous as excision, though in a different way, in those of larger size." A case in which caustic potash had been applied to one of these tumors, situated on the chest, ended fatally, under the observation of Baron Boyer. Wedelius mentions a case in which the nævus turned cancerous on the application of "aqua fortis*." But I may add, that modern surgeons will not be deterred from employing the remedy by any apprehension that such an effect will be produced.

When nævi are treated by ligature, very alarming symptoms are liable to come on. Of this point, likewise, proof is to be found in Mr. Lawrence's paper, referred to above. He states, in detail-

* *Vide* Heister's Surgery, vol. i., p. 344.

ing the particulars of a case treated in this manner, "The infant seemed to suffer considerably when the ligatures were tied, the process being attended with considerable stretching and dragging of the surrounding skin, which was thrown into several large folds. For thirty-six hours the child was restless, crying almost incessantly, and occasionally convulsed." In a case of the same kind, which I had myself an opportunity of watching, exceedingly severe symptoms followed the operation, and continued for more than two days, so that the poor little sufferer's life was despaired of. Mr. Langstaff also informed me, that in a case of large nævus treated by him in the same manner, such violent constitutional disturbance was excited, that the child's life was for some time in the greatest danger. I may also add, that the treatment by ligature, severe as it is, will not always, as will be seen by and by, prove successful as a remedy for nævi. The same, too, may be said of their treatment by excision. I have known them recur after having been excised by the most experienced operators. I witnessed a case of the kind in Mr. Abernethy's practice. The nævus was situated on the sternum, a situation most favourable for the operation. In fact, such is their nature, that whatever may be the operation performed, I believe it will be invariably found, that if the smallest portion of the morbid structure be left behind uninjured, it will act as a "punctum saliens" (if I may use the expression), from which disease, perhaps more formidable than was excised at first, will be reproduced.

Another objection to all the modes of treatment adverted to above, is the unsightly scar which is in all cases left behind. And this objection likewise applies to the treatment of large nævi, by vaccination, a plan of treatment free from danger, it is true, but which is also very likely to fail.

With a view to obviate, as far as I was able, the inconveniences detailed above, I was induced to employ a mode of treatment, which, to me, was perfectly novel, as applied to nævi.

A few years ago I made a brief statement of my plan of treatment at one of the meetings of the "London Medical Society," and it was subsequently noticed, though in a very imperfect manner, in some of the publications of the day. But it has been no where, as far as I have seen, accurately or completely described; and as I have subsequently had repeated opportunities of employing it, and with great success, I feel it incumbent on me, without any further delay, to place the following succinct account of it before my professional brethren. And it is the more necessary that I should do so, because, in a new edition of a surgical work since published, the plan is adverted to as possible to succeed, without (in ignorance no doubt) the slightest reference to its author, or even the most distant intimation that it had been ever attempted.

The plan to which I allude, and to describe which it will be my principal object on this occasion, consists of the injection into the substance of nævi of a stimulating, and, in some cases, almost an escharotic liquor. The success which occasionally attended the vaccination of such tumors had, I considered, established the principle that they might be cured by exciting in them inflammation, or that condition of a part, be it what it may, that sometimes leads to its absorption. To effect this end, I had tried various means; but as they were not generally successful, it is not worth while to detail them here. The failures in such instances having arisen, as it appeared to me, from the means employed not producing a sufficient degree of inflammation; and having met with a very large pulsating nævus, so situated that it could not, without the utmost danger, be removed by the knife, by the ligature, or by caustic, I resolved to put to the test the plan adverted to above. I considered it a fair opportunity to adopt this mode of treating it, because in this case the morbid structure, of which by far the greater part was subcutaneous, was soft and sponge-like—indeed so soft, that when pressed between the finger and thumb, the intervening substance seemed to shrink away; but in an instant, the pressure being removed, it re-appeared of its former size, and as erectile as ever. The nævus, which, as I stated, was of very large size, was situated on the left side of the face, extending from the angle of the lip, where it commenced, upwards to the temple, and transversely from the nose almost to the ear: moreover, portions of it occupied the eye-lids, projecting irregularly like varicose vessels, from their

inner surfaces, and its boundary was altogether very irregular. The whole thickness of the cheek was in some parts made up, as it were, of the nævus, the diseased structure being visible, and projecting as well on the inner as on the outer surface. It was, however, only at particular points that the skin and inner membrane of the cheek participated in the disease, as over the greater portion of the tumor they were unchanged in structure. But even where the skin and membrane of the mouth were unchanged, the purple colour of the subjacent disease was very visible. The nævus, when first observed at the birth of the child, was not larger than the point of a quill. It began to enlarge very shortly after birth; and at the time it was placed under treatment, it was increasing rapidly. The treatment of it was peculiarly difficult, in consequence of its great extent, and the irregularity of its boundary. The treatment consisted in injecting into the subcutaneous portions of the diseased mass a liquid composed of spt. ætheris nitrici and nitric acid; and in applying to the more superficial portions, or to such portions of the skin as were in a morbid state, the concentrated nitric acid. The injection did not enter very readily—by no means so readily as might have been expected, therefore much could not be accomplished at once, and the progress of cure was of necessity slow; but by persevering in the same means, one portion after another of the disease was removed, till the greater part had entirely disappeared. At this period the child was taken ill with the measles, which unfortunately proved fatal to it. It may be said, therefore, that the case is not complete; but it should be borne in mind that to the extent to which the remedy had been applied, it was successful, and thus its efficacy was established as far as it could be by a single instance. I had no opportunity of examining after death the parts that had been operated on.

One of the next cases that I operated on, was in a patient of Mr. Austin, surgeon, of Red Lion-street, Clerkenwell. The child was a few months old. The nævus was situated on the forehead, prominent, about the size of half a walnut, principally subcutaneous, and was increasing. I injected it five times. The liquid, which was the same as was employed in the former case, passed freely into its substance, and in about seven weeks time the cure was accomplished. The effect of the injection was hardening of the part into which it entered, and as the hardness subsided the disease disappeared. Mr. Austin lately afforded me an opportunity of seeing the child, who is now about nine years old. The case is very satisfactory, the operation having been performed so long ago, and not a vestige of the disease remaining. That which was the cutaneous portion of the nævus is now quite white, and looks like a small cicatrix.

Another case, which I also injected in the same manner successfully, was brought to me at my own house, by the late Mr. John Wood, who had been house-surgeon to St. Bartholomew's Hospital. The nævus was situated on the cheek, and it was one of the cases treated in the hospital by means of the needle and ligature, and had been considered cured; but unfortunately it reappeared.

By the same treatment, too, I succeeded in curing one of the largest subcutaneous nævi that I ever saw: it was of the size of a very large orange, extending from above the angle of the jaw downwards, almost to the clavicle, and deeply into the substance of the neck; projecting also from the surrounding surface more than three inches. The mother lately said it was larger than the largest orange, and I believe she may be right.

The skin covering it was for the most part healthy, except at its most prominent part, where it put on the usual deep red and vascular appearance of cutaneous nævi. In texture it so much resembled a sponge, that when grasped in the hand it could be diminished to nearly half its size. The child resided a short distance out of town (Walworth); but I got it brought to the hospital on the operating day, when it was examined by all the surgeons of the hospital who were present, and also by many visitors, who all agreed that they knew of no means by which the disease could be successfully treated. The application of caustic was quite out of the question; and the same may be said of the ligature, and also of excision, as they could not possibly have succeeded, from the great magnitude of the disease and the depth to which it extended. The cure occupied about nine months, and the injection was at first sometimes

thrown in twice a week, but generally only once, and occasionally not oftener than once a fortnight. No unpleasant symptom followed at any time. Sal volatile was the liquid generally injected, and sometimes in an undiluted state. At first the superincumbent skin did not contract so fast as the tumor became absorbed, so that it hung like a pouch partly emptied, pendulous on the side of the neck. The red part, or that portion of the skin which was implicated in the disease, entirely lost its apparent vascularity, became white and shrivelled, without any topical application being made to it, and assumed very much the character of an old cicatrix. The rest of the skin (that covering the great bulk of the tumor) was of natural colour and texture. I lately saw the child, who is nearly five years old: he was four months old at the time that the treatment was commenced. There is not a vestige of the disease remaining, and the skin is as closely adapted to the subjacent parts as on the opposite side of the neck.

A very fine child, on whom I operated in the same manner, for a very large nævus on the face, between three and four years ago, was lately brought to me by its mother, to show me how completely the disease had been cured. It was situated on the left side of the face, occupying the greater part of both the eyelids, a considerable portion of the cheek, and the whole of the corresponding side, as well as the front, of the nose. When I first took the case in hand, the child was three months old, and a most disgusting object: it is now a very nice looking child, and it requires very close inspection to discover that the disease had ever existed.

I have subsequently treated many other cases of nævi of various sizes, and in various situations, by injection, without the occurrence, in a single instance, of an untoward symptom, and generally with complete success. I have cured several situated on the head, three on one child, and some very large ones on the trunk and limbs; but as the preceding cases are sufficient to prove the efficacy of the plan, under different and very formidable circumstances, it would be unnecessarily occupying time to give others in detail: I shall therefore proceed to describe more particularly the course I pursue in performing the operation. I shall also point out, as clearly as I am able, the variations which it is necessary to make in the treatment of different cases, as that which is most applicable to one is not always equally so to others; and I shall at the same time point out the great advantages which, in certain cases, I consider this plan of treatment possesses over every other. I shall, moreover, subjoin a few general observations on the nature of nævi, and on some other modes of treatment which I have found it advisable to employ, under particular circumstances and in particular cases.

For the injection of nævi it is necessary to have a syringe with tubes of different dimensions, capable of being changed at pleasure. This is the case because nævi are of different sizes: into those of larger size the injection enters more readily if projected in a larger stream; in those whose size is smaller, it answers better for the stream to be in proportion small. The point of the tube should be introduced through an aperture in the skin, at some little distance from the disease, as there is then greater facility in compressing the nævus, so as to prevent hæmorrhage. It is easy to prevent a single drop of blood being lost; and after the injection has properly taken effect, it rarely happens that there remains any disposition to hæmorrhage. Before injecting it the nævus should be compressed, so as to empty it of its blood, and the pressure should be kept up till the instant that the fluid is projected by the syringe. The fluid should be retained in the nævus for from five to ten minutes. This, of course, is easily effected by making pressure along the track which had been occupied by the tube of the syringe.

It is not always equally easy to inject nævi, as they differ materially in their texture: some of them which are of a spongy structure, and of a moderate size, can be injected with facility and at once; but this is seldom the case with larger ones. There are nævi so solid in their substance, that, whether they be large or small, it is exceedingly difficult to inject them at all. Before it can be accomplished, it is requisite to puncture them in various directions; but it should be done from a single point, so that the punctures shall proceed like radii towards one-half of the

circumference of a circle. It is likewise sometimes extremely difficult to excite in them the necessary degree of inflammation,—so difficult, that the operation is often obliged to be repeated several times, and this notwithstanding a very stimulating fluid has been employed. Moreover, a nævus may be too large, as in the cases I have adduced, to be treated all at once in the manner described above. If so, it must be divided into different sections, one, two, three, or more; and each section must be made the subject of a separate operation. But to inject the whole of even the more spongy nævi, if of moderate size, it is sometimes necessary to introduce the syringe at various points. When a nævus has been large, I have thrown the injection into three different parts on the same day; but, generally, I only make one attempt on the first occasion. By operating on only one part at first, I ascertain with less chance of inconvenience whether the liquor employed is too strong or too weak, and thus obtain information which enables me to proceed with more certainty in the subsequent steps of the operation.

Until a person has practised the operation a few times, it will be better that during the act of injection pressure should be made around the nævus, as otherwise the liquid will be liable to be forced into the contiguous cellular tissue, in which it would be pretty sure to excite inflammation, and consequent suppuration. For the purpose of making the pressure, the rim of the cover of a pasteboard or wooden pill-box, answers very well. The covers, as is well known, can be procured of almost any size; and a notch can be easily cut in them for the admission of the point of the syringe.

When a nævus is well injected it feels tense, and loses much of its spongy character; its colour likewise becomes changed, varying in some degree according to the nature of the fluid employed. The change of colour is not always very considerable, as but little of the injection usually passes into the cutaneous portion of a nævus, although the subcutaneous part of it shall be readily and fully injected. The injection is known to have taken effect by the tumor becoming incompressible, which in some cases it does in an hour or two, but in others a day or two will sometimes previously elapse: after which it is rare for the disease to increase; but its subsequent absorption is sometimes very slow.

I am not prepared at present to recommend the exclusive employment of any one liquid as an injection for nævi. The spirit of nitric æther, with the addition of a small proportion of strong nitric acid, I have used oftener than any other; about one part of the latter to from ten to fifteen of the former. The spirit. ammoniæ aromaticus has been most efficient in some cases in which other liquids had failed. I have also employed successfully solutions of chloride of lime, of sulphate and acetate of zinc, of muriate of ammonia, of hydriodate of potash, &c. I have never used wine for the purpose; but Mr. Stanley employed it in a nævus seated on the lip, and, as he informed me, with success.

The chief advantages of the plan of treatment which I have been recommending are, that it is applicable to nævi so large, and so situated, as to be wholly irremediable by any other means; that it occasions no deformity (a point of some importance when the part affected is the head, face, neck, or arm of a female), the small mark remaining where the syringe enters being at a subsequent period scarcely discernible; that it produces very little pain, much less than any of the other modes most relied on; and that there is no constitutional disturbance of any consequence resulting from it.

I have stated, that from the effect which sometimes followed the vaccinating of these tumors, I was led to adopt the practice of injecting them; but I should also state, that having previously investigated most attentively their nature and habits, if I may use the term, I had arrived at the conclusion that they were only to be cured by means which would effect the complete removal or annihilation of the morbid structure: and I may add, that, to be competent to determine what plan of treatment is most applicable to nævi, it is indispensable to be acquainted, as far as possible, not only with their structure, to investigate which so much pains has been taken, but also more particularly with the nature of the connexion that subsists between them and the surrounding parts. From in-

attention in this respect, the most erroneous opinions have been entertained. Some surgeons still suppose (of which I have lately had evidence) that nævi consist of an enlarged artery, or vein; and in accordance with this opinion is their practice: they endeavour to compress the enlarged vessel, so as to prevent the transit of the blood through it, expecting by that means to remove the disease. For this purpose a ligature has been sometimes put on what has been supposed to be the principal vessel supplying the morbid part; and I was shown, not long ago, an instrument which had been ingeniously enough constructed to effect the same end.

I believe, however, it will be found, that, both in their pathology and treatment, such practitioners are greatly mistaken: indeed, I do not hesitate to say, that, as regards the more common forms of nævi materni, they certainly are in error. Their mistake, no doubt, arises from the success which has been known to attend a similar mode of practice in true cases of "aneurism by anastomosis;" a disease comparatively very rare.

In the nævi under consideration, there is a morbid structure to be got rid of; a structure not dependent, for its nourishment and vitality, upon a single vessel, but capable at all times of deriving sufficient blood for its subsistence, and also for its growth, from any of the vessels of the parts with which it is in immediate connexion. In Mr. Langstaff's case, to which I have adverted, "the nævus was principally supplied with blood from the muscular branches given off by the anterior tibial artery, which were greatly enlarged, and extremely numerous; it was also assisted by the external articular and the arteries given off by the popliteal, previous to its division into the three arteries of the leg." I knew a case in which the diseased structure was nearly separated by incision from the surrounding parts, and a ligature applied to every vessel that bled, but without the least permanent change in the condition of the disease. Another case, too, was treated on the same principle with caustic; a deep slough having been formed all round the nævus, which was of very large size, so as almost completely to separate it from the body, and yet no good resulted; for after the slough came away, the parts re-united, and the disease remained as vascular and disposed to increase as ever. It follows, therefore, that it is no more reasonable to expect a nævus will be got rid of by merely obstructing the circulation through the principal vessel that supplies it, than would a fatty or any other tumor. To afford even a chance of success to any operation of the kind, the flow of blood to the contiguous parts must likewise be cut off, or at all events very much diminished. In fact, the only means that can be depended on, for the effectual removal of the morbid structure, are such as at once destroy its vitality, or such as, operating more gradually, occasion its absorption: and of all the means that have been recommended to effect its annihilation by the latter process, injection is, I believe, the most to be depended on. By that means a greater or lesser degree of inflammation may be excited in it, the effect of which is to change its texture, converting what was a spongy into a solid substance. In this state its vascularity certainly becomes diminished; but as its vitality remains, the cause of its subsequent absorption is not quite apparent. If, however, I might venture an opinion, I would say that it is thus brought very much into the condition of a foreign body, so that it becomes an irritant to the surrounding parts, and, perhaps, in some degree, to the general system; the absorbents, consequently, are roused into action, by which, in a longer or shorter time, its removal is accomplished.

Although my advocacy of injection is so decided, yet I wish to guard against its being supposed that I altogether repudiate all the other plans of treatment which have been recommended with the same object in view.

I am well aware that there are many other means besides injection, by which that change in the condition of the part conducive to absorption may sometimes be very satisfactorily brought about. The principal of them are the combined use of pressure and cold; the insertion of the vaccine virus at different points of the skin covering the nævus; one or more setons made to pass directly through the morbid structure itself; and the repeated application of tartarized antimony, as well as of various

other stimulating substances, to the whole surface of the morbid growth. Acupuncturation has moreover been recommended by Dr. M. Hall, and also by Professor Lallemand, of Montpelier.. I have several times attempted to cure the disease by this mode, but have never succeeded. For my own part, I must say I should have been surprised if there had been a different result; because I have seen nævi not only punctured in the manner recommended, but also a most stimulating fluid injected into the punctures, and yet a sufficient degree of inflammation not produced. This has been particularly the case in nævi of more solid texture. As, however, the treatment has, in the able hands alluded to above, proved successful in a few cases, it may be considered right to give it a further trial: and the same may be said of all the measures just adverted to.

There is likewise another plan, employed, I believe, first by myself, by which I have succeeded in curing the disease; and as it operates principally by exciting the absorbents into action, I shall avail myself of this opportunity to describe it. In this plan, the advantages attending the use of pressure and of the seton are combined. By the means made use of, partial strangulation of the part is effected. Ligatures are passed through the substance of the tumor, by means of which, and pieces of bougie applied on each side, as in the quilled suture, the circulation of the part is placed under complete control. In this manner, therefore, perfect strangulation of the part might be produced, and its consequent death; but the object is to employ only such compression as will excite that degree of inflammation in it which is required to occasion its absorption. The pressure can be increased or diminished with the greatest facility, according to circumstances; and even after having been remitted, or rather intermitted, for a few days, it can be again applied, if care be taken not prematurely to withdraw the ligatures. If no more pressure be employed than is really requisite, there will be very little pain occasioned by it; but, on the contrary, if too much force be employed, suppuration will be produced, and consequently there will be attendant a greater or less degree of pain and constitutional disturbance.

I had recourse to this plan of treatment in a large nævus on the head of a child between three and four months old. The tumor projected full half an inch from the surface, and in its transverse diameter it measured nearly two inches. In twenty-four hours time the operation was followed by such inflammation and swelling, that it was necessary to loosen the ligatures. A slight degree of fever ensued; a small collection of pus also formed, which was discharged through a small opening in the centre of the tumor. After this every thing went on well, and the disease gradually disappeared. It was not necessary to repeat the operation. I have not yet had sufficient experience on the subject to justify me in giving a decided opinion on it; but from what I have seen I am inclined to believe that it is a plan of treatment which will be found very efficient in a large proportion of the subcutaneous vascular nævi. I should consider it especially applicable to such as may be situated on the cheeks or lips, as well as to those cases in which the disease projects decidedly beyond the surrounding natural surface —to those cases, in fact, in which excision, caustic, and the ligature, have been recommended as means by which the entire nævus and the superincumbent skin should be completely destroyed. A great advantage of this plan of treatment is, that it cures the disease like injection, without occasioning any deformity: the large scar which remains after most of the other modes of treatment being almost as great a blemish as the disease itself. It will also, I suspect, be found a much more efficacious mode of treatment than the seton, as usually employed.

But in cutaneous nævi — that is, in those which are seated principally in the skin, as well as in smaller ones of subcutaneous growth, the treatment by caustic is in many cases especially applicable. In the former I prefer the concentrated nitric acid as the remedy; in the latter the potassa fusa. And if, in the use of these means, proper care and caution be observed, they will, I believe, never fail. Moreover, they would be applicable to the greater number of cases that occur, if employed at a sufficiently early period, inasmuch as, as has been stated before, a very large majority of nævi

are, at the time of birth, very small. I have, however, from the want of proper care and caution in the use of these means, seen much mischief ensue. I have observed the skin destroyed far beyond what was the intention of the operator; so that, after the cure of the disease, a cicatrix remained, so large as to constitute of itself a degree of deformity greater almost than the original disease.

It is hardly possible to keep an infant quiet while any thing is done to it which occasions pain. I therefore, before making use of either the potash or acid, always apply a thick coat of sealing wax varnish to the parts surrounding the nævus. By this simple contrivance I am able to confine the action of the caustic to the necessity of the case, and at the same time to operate with greater freedom. To some surgeons who are not much in the habit of using the stronger caustics, it may appear that I am recommending an unnecessary precaution; but I feel pretty confident that if they make trials with and without it, they will readily admit the advantage of my plan. A single application of the potash is sometimes sufficient, especially if it be used in the form of paste, as recommended by Mr. Abernethy for the making of issues; but it is generally necessary to repeat the acid several times. I have found that it is generally better to prevent suppuration, if possible, in which case the destroyed part will be thrown off as a scab, and the consequent scar will be less. This can in most cases be accomplished by keeping the part exposed, and occasionally wetting it with a spirituous lotion, containing also mucilage of acacia and oxide of zinc.

I have cured between two and three dozen nævi by these means; but it would be unnecessarily occupying the time of the reader to detail any of them, as it would be little more than repeating the description of the plan which I have been just giving.

The caustic potash has been so strongly recommended by Mr. Wardrop, and the nitric acid has been so long employed by different practitioners, that I claim no merit for adding my testimony in their favour. My only object in noticing them has been to suggest a more judicious and a safer mode of using them, and to recommend their employment at the first moment after birth that a nævus is observed to be increasing.

I should have stated, that the cutaneous portion of a nævus will sometimes, though rarely, remain after its subcutaneous parts have entirely disappeared. In that case I apply to it concentrated nitric acid, or the caustic potash, by which means every vestige of the disease is readily and easily removed: indeed, I believe whenever the cutaneous portion is large, this would be the better practice, as the skin which is the seat of a nævus not being of its natural texture, will never, of course, have quite its natural appearance: it will appear thinner than healthy skin, shrivelled, and more loosely attached. The scar left, too, after the healing of the wound occasioned by the caustic, if properly employed, is never so large as the original mark.

Sept. 24, 1836.

ON THE FUNCTIONS OF THE MUSCLES AND NERVES OF THE EYE-BALL.

To the Editor of the Medical Gazette.

Sir,

In the Medical Gazette of September 24th, will be found a communication from my colleague, Mr. Walker, of Manchester, on the Functions of the Muscles and Nerves of the Eye-Ball; in reference to which I have considered it my duty to trouble you with the following remarks. A paper by Mr. Walker, containing similar views to those published in the Gazette, was read at the last meeting of the British Association, held at Bristol. After Mr. Walker had sent this paper to Bristol, he read a copy of it to me; when I was much surprised to find that the explanation given by him of the functions of the muscles and nerves of the eye-ball was, with one exception—viz. the action of the superior oblique muscle—similar to my views on this subject, communicated to Mr. Walker some years since, contained in my Introductory Lecture for 1834 (which Mr. Walker had an opportunity of deliberately perusing), and further explained in a paper read by me to the Manchester Medical Society, Novem-

ber 4th, 1835. To this may be added, that I had previously informed Mr. Walker that my views on this subject were sent for insertion in the last volume of the Transactions of the Provincial Medical and Surgical Association, but that, in consequence of being too late, the paper would not appear until the publication of the next volume. Whether Mr. Walker has made sufficient acknowledgment in his paper, of the use he has made of the discoveries of another, can only be decided when an opportunity is afforded of comparing the papers; but when the foregoing circumstances are considered, would it not have been more courteous in him to have reserved his observations until after the publication of his colleague's remarks on the same subject?

I am, sir,
Yours respectfully,
R. T. Hunt.

Manchester, Sept. 26, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'Alembert.

De la Prostitution de la Ville de Paris, considerée sous le Rapport de l'Hygiène publique, de la Morale, et de l'Administration. Par A. J. B. Parent-Duchatelet, Membre du Conseil de Salubrité, Médecin de l'Hôpital de la Pitié, &c. Deux Tomes. Baillière.

This is one of the most remarkable books we have met with of late. It abounds with information of a singular kind, interesting at once to the physiologist, the moralist, and the medical statistician. The labour which it cost the author must have been immense: he was engaged upon it for several years, and after all, unfortunately, did not survive to see it laid before the public. Parent-Duchatelet died in March last, at the comparatively early age of 45, exhausted by the toils of incessant research.

As we intend to bring this work on more than one occasion before the reader, we shall limit ourselves for the present to a brief notice of its contents. The chapters of the first volume commence with generalities respecting the number of prostitutes in Paris, the parts of France from which they generally come, the families they usually spring from, and the causes leading to their ruin. The characteristic manners and habits of these unhappy females are then treated of: after which we have a sketch of their chief peculiarities, taken in a physiological point of view. The several arrangements of medical police and hygiène adopted with regard to the *prostituées* in Paris, are noticed at much length; and we are next presented with such a picture of the mode in which the various *maisons* in that regularly-profligate capital are managed, as we might expect from the author had he been assisted in his explorations by another *Diable boiteux*.

An ample account is given in the second volume of the sanitory regulations observed with respect to the *filles publiques;* the hospitals for the treatment of syphilis are described; and the houses of correction, with the several methods of punishment followed in each, are afterwards noticed. Certain details of a curious nature, but most important in relation to state-measures and administrative policy, form the conclusion of the work.

The whole is said to be founded on documents the most authentic, procured, in fact, in the government offices of France; and no pains seem to have been spared by the author to supply, by actual observation and personal inquiry, all the knowledge which in that way could be obtained for the completion of his extraordinary undertaking.

A very striking peculiarity of the work is the propriety and decency with which every question is discussed: we believe that notwithstanding the delicate nature of very many of the subjects touched on, there is not the least impurity in the author's mode of handling them; his language, though free and unfettered, contains no expression calculated to give offence to modesty or good taste.

Among the points noticed in the physiological portion of the work are, the *embonpoint* of most of the *prostituées*, the peculiar voice which many of them have, their infecundity, their stature, the prevailing colour of their

eyes and hair, &c. It might at first seem that it were impossible to avoid fanciful speculation in treating of such matters, but, on turning to the chapters referred to, we find that all rests on observation and the official returns.

MEDICAL GAZETTE.

Saturday, October 1, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

FACTS VERSUS FALLACIES:

BEING A FEW HINTS TO STUDENTS ON THE OPENING OF THE SESSION.

OF all the qualities which the student needs to possess, who visits the metropolis with a view of pursuing his professional education, there is none that he will find more requisite, even at the very first step, than caution. He should know that there are those abroad who lie in wait for his credulity, and that he must be particularly on his guard against volunteer guides. We feel obliged to give this hint, *in limine*, on observing the recent conduct of our dishonest contemporary — the Lancet. With this brief admonition to our young friends — to be cautious under whose guidance they place themselves — we dispense with giving further *advice:* in the remarks which follow, we appeal to their reason and understanding.

There are two signs by which the dishonest proceedings of the party in question may be discovered and unmasked—first, the gross partiality with which he cries up a certain set of teachers; and secondly, the falsehoods and lying statements with which he endeavours to carry on his work of deception.

As to the first, it is *so* gross, that none but the most simple and inexperienced can be deceived. The trick is perfectly well understood about town, and is only adapted to catch the novices who are very fresh and green from the country. To so shameless and brazen a pitch is the system now carried, that all the walls in the neighbourhood of London might as well be chalked with the emphatic puffing of — TRY WAKLEY'S MATCHLESS. But the *honourable* member for Finsbury has always some such respectable scheme on his hands, and is now only doing that for the Gower-street speculation which he lately used to do for that bantling of his in Lancaster Place. His COLLEGIUM WAKLEYANUM has been wholly exploded, or abandoned of late, to make way for his new favourites of "University College."

All this is so palpable and notorious, as not to require dwelling upon. But the systematic attempt of the Lancet to mislead the young men who arrive in London about this season, and to injure all the other medical schools of the metropolis, to the teachers in which he is personally hostile, is so replete with falsehoods and wilful misrepresentation, as to require a special exposure. The last number of the journal just named contains what the Editor is pleased to call a "resumé of admonitory comments;" in referring to which he says—

"Neither there nor in this place, however, shall we attempt to institute any comparison into the respective merits of the various establishments or teachers. The invidious nature of such an undertaking—the task which such an investigation must impose—would require nerves of iron for its execution, with strict impartiality; and, at last, great injustice might be done,"—*et cetera, et cetera, et cetera.*

After this declaration of the undertaking being "invidious," and of there being a risk of doing "great injustice," we felt confident that the "comparison"

was to be made, and some mystification attempted: nor were we deceived; for at page 19 the mask is thrown aside, and as pretty a specimen presented to us of adulation of one party, and misrepresentation of others, as any one could desire to see.

The object is to represent the school of University College, Gower Street, as by far the cheapest in London; and the mode of effecting this, is by taking the North London Hospital, and setting it in the foreground of the school to which it belongs. Now if all that a pupil had to do in London were to attend an hospital, this would be very fair; but as it happens that he has certain lectures to attend also, it is quite clear that the only honest and rational method of calculating the comparative expenses of different schools, is to take the amount of fees *for the lectures and hospital attendance together*. If this be done, the account will stand very differently from that into a belief of which our dishonest contemporary endeavours to betray the pupils.

At once the simplest and most generally applicable comparison between the different schools is, to ascertain for what sum at each the pupil may attend, during an unlimited period, all the lectures required by the College of Surgeons and Society of Apothecaries. The calculation stands thus:—

	£	s.
Aldersgate School	46	4
Webb Street	52	10
Westminster School	52	10
Middlesex Hospital	53	11
St. Thomas's Hospital	55	13
St. George's Hospital	56	14
King's College	63	0
London Hospital	63	0
St. Bartholomew's Hospital	65	2
Guy's Hospital	66	3
University College	74	10

[For farther details, see the table which follows the present article.]

This requires no comment: as regards lectures, the University College is the most expensive school in the metropolis, whether for the shortest attendance required by the corporate bodies, or for an unlimited period; for the latter, the difference between it and some of the best private schools is nearly thirty pounds, while for the former it exceeds that sum.

Now let us inquire into the facts connected with hospital attendance, and here we admit *in limine*, that *a certificate* of having attended the medical and surgical practice at the "North London" may be procured on terms—such as we trust will never be the case at any other hospital in the metropolis. Let us explain.

When young gentlemen come to London they have enough to do, Heaven knows; one lecture following after another from morning to night in such rapid succession, as necessarily to leave but a very short space in the forenoon, during which even the most zealous can be in the wards of their hospital. Heretofore no pretence was ever made of attending both the medical and surgical practice at the same time; and at the other hospitals the regulation of attending each separately still prevails. But the conductors of the North London Hospital do, what we cannot venture to designate as it deserves: they give certificates of one year's attendance on *both the medical and surgical practice together!* at the expiration of twelve months after the payment of 21*l.* into the hands of their treasurer. Long may the North London Hospital stand alone in this respect, and may its conductors find consolation in the praises of the Lancet for this adoption of the "certificate system!"

Considering the smallness of its size, and the necessarily very limited field of observation it affords, we have no doubt the North London is a very good hospital; but he who says "it stands forward from the rest in bold and brilliant relief," knows nothing about the

others of which he so confidently speaks; for it so happens that he has been excluded from some, and has not the *entrée* to any; a circumstance which it is just possible may somewhat prejudice his opinion.

By far the most common hospital attendance now adopted by pupils, is one year of the medical (which frees them for eighteen months), and one of the surgical practice—this qualifying for their examinations. Assuming the above as an average, we now return to our comparison of expenses. If the pupil takes his ticket at the North London Hospital, for the medical and surgical practice separately, the sum is 15*l.* 15*s.* each—making 31*l.* 10*s.*; but we shall suppose that he takes out both at once, in such manner as to enable him to attend during two successive years—and for this he pays 26*l.* 5*s.*

The Lancet, for its own purposes, has chosen to institute an especial comparison between its favoured institution and three others—never mentioned without some misrepresentation—viz. St. Bartholomew's, Guy's, and St. George's. We shall take the same, and in the same order. The paragraph is not very intelligible—indeed, is scarcely English; but we shall quote it verbatim, to show the extent of the deception which it is attempted to practise:—

"But suppose we compare the 26*l.* 5*s.*, charged at the North London Hospital, with the sums charged at the other hospitals for attendance to pupils who are not dressers. The charge, even then (the attendance, also, on the surgical practice being limited to twelve months) will be more than 30*l.* higher at St. Bartholomew's (for instance) and more than 24*l.* higher at Guy's Hospital (as another instance), and more than 51*l.* higher at St. George's, (perpetual *there* to both) than the charge at the North London Hospital."

Now, instead of following this calculation, which we submit is nearly unintelligible, we shall compare things which are similar, and which will afford useful information. We suppose that, as is usually done, the student wishes to attend the medical and surgical practice for the periods required by the College of Surgeons and Society of Apothecaries respectively—viz. eighteen months and one year. At St. Bartholomew's a pupil may attend the medical practice for a year and a half, and the surgical practice for ever, for 42*l.* But this sum, instead of being "more than 30*l.*," is only fifteen guineas above what he would pay at the North London hospital, containing only one-fourth the number of beds. At Guy's, the fee is within one shilling of being the same as at St. Bartholomew's, while the pupil has the advantage of attending also the surgical practice at St. Thomas's.

Come we now to St. George's; and here we particularly solicit the attention of the reader, because, when it is mentioned by our contemporary, a more impudent fabrication than usual is always sure to follow. It is intended to convey the idea, not only that St. George's is enormously dearer than the North London, but that it is even more expensive than St. Bartholomew's or the Borough hospitals. Now the fact is, that a pupil may attend the surgical practice of St. George's Hospital, for a year, for 21*l.*, and the medical practice, during eighteen months, for 16*l.* 16*s.*; or, *if he take the medical ticket first*, he may then attend the surgical practice for four guineas less; being, in all, 33*l.* 12*s.* But it would cost him 26*l.* 5*s.* at the North London hospital; so that the difference for the attendance required by the College of Surgeons and Society of Apothecaries, *is only seven guineas!!!*—and setting aside the great disparity in the size of the hospitals, the St. George's surgical pupil has the privilege included of *acting as a dresser for three months.*

Again: taking a general view of all the expenses, we find that the sum required

for attending the lectures, and the hospital practice required by the College of Surgeons and the Society of Apothecaries, at St. Bartholomew's, amounts to 107*l.* 2*s.*; at Guy's, to 108*l.* 4*s.*; at St. George's, to 90*l.* 6*s.*; at University College, to 100*l.* 15*s.* So that the whole expense at the magnificent establishment of Guy's, and including the practice of two great hospitals, exceeds the North London Hospital School, and its hundred beds, by only 7*l.* 9*s.*, and at St. Bartholomew's, only by 6*l.* 7*s.*, while at St. George's Hospital the expense, instead of being greater, is less, by 10*l.* 9*s.*

So much for the veracity and fair dealing of our advocate for Gower Street and its hospital. A word more, and we have done.

If we turn for a moment from his exertions in favour of that establishment, to the men connected with it, or the man rather, who forms the special subject of his laudation, we must acknowledge at least the gratitude of the worthy editor, however we may wonder at his consistency and discrimination. Mr. Liston, the present idol of Wakley's attachment, is, we believe, the only person of any standing in the profession in London, who is desirous of the good opinion of the honourable member for Finsbury; he has not been ashamed to be present at, and to take part in, meetings where Wakley has been prominent: hence, naturally, the reciprocal feeling on the part of the latter. The great attraction now at the North London Hospital is Mr. Liston: Mr. Liston is all in all, just as it used to be with Dr. Elliotson, who at present seems to be completely thrown overboard. Why is this? Not one little word even of passing courtesy is expended on the Doctor, who could once boast the warmest support of the worthy Finsburian. How are we to account for this phenomenon? Are we right in attributing it to the mortal hatred that subsists between Dr. Elliotson and the *great surgeon* of the North? We doubt not we have hit the mark, as the participation of feuds and fancies is one of the signs of firm and steady friendship: the *idem velle* and *idem nolle* is here complete; and long may it subsist in its beautiful harmony and concord!

A word, however, on the consistency of the thing. Mr. Liston is held up as the model of surgeons — the greatest after Sir Astley Cooper, and so forth. How is this, when we have Mr. Lawrence still amongst us in all his pristine vigour and ability, who was once vested with the championship by the same discriminating judge, nor was stript of it, that we are aware, for any deficiency or inferiority of skill? But Mr. Lawrence shook off the patronage of Wakley, and hence the rival that has been set beside his throne.

But Mr. Wardrop, poor man! what has *he* done to merit this unceremonious set down from the post of honour? Has he no means of *intercepting* the favours which are now so thickly bestowed on his brother surgeon? Or are his *intercepted* favours exhausted, and his means of paying due homage to his patron extinct? Whatever be the cause, it is clear that the once celebrated Mr. Wardrop is no longer a star in the ascendant, and that, though he would want some little support in resuming his difficult task of lecturing again in an obscure quarter, he can no longer reckon on more than a little "faint praise" from his quondam panegyrist!

Be warned in time, all ye who aspire to the good opinion and the graces of our respectable contemporary. Let the things that have been be a warning to you; and wait but a little, we advise you, to observe the career of the present protegé of the North London Hospital.

[*Table, &c.*

TABLE,

Shewing the amount of Fees at the different Schools, for attendance on the Lectures required by the College of Surgeons, and Society of Apothecaries.

	Anatomy and Demonstrations.	Medicine.	Surgery.	Chemistry.	Materia Medica.	Midwifery.	Botany.	Forensic Medicine.	Additional per centages on those who have not a nomination.	Matriculation Fee.	Total.
	L. s.	L. s.	L. s.	L. s.	L. s.	L. s.	L. s.	L. s.			L. s.
Aldersgate School	12 12	5 5	5 5	6 6	4 4	5 5	4 4	3 3	none.	none.	46 4
Webb Street	15 15	6 6	5 5	6 6	4 4	6 6	4 4	4 4	none.	none.	52 10
Westminster School	15 15	6 6	6 6	6 6	6 6	5 5	3 3	3 3	none.	none.	52 10
Middlesex Hospital	16 16	6 6	5 5	6 6	5 5	5 5	4 4	4 4	none.	none.	53 11
St. Thomas's Hospital	18 18	6 6	5 5	6 6	4 4	6 6	4 4	4 4	none.	none.	55 13
St. George's Hospital	16 16	6 6	5 5	8 8	6 6	5 5	4 4	4 4	none.	none.	56 14
King's College	18 18	6 6	6 6	10 10	6 6	6 6	4 4	4 4	none.	none.	63 0
London Hospital	21 0	7 7	5 5	8 8	4 4	7 7	4 4	4 4	none.	none.	63 0
St. Bartholomew's Hospital	21 0	7 7	7 7	8 8	6 6	5 5	4 4	4 4	none.	none.	65 2
Guy's Hospital	21 0	8 8	5 5	8 8	4 4	10 10	3 3	4 4	none.	none.	66 3
London University College	18 0	8 0	6 0	10 0	9 0	7 0	6 0	4* 0	4 10	2 0	74 10

* In the Prospectus of the University no terms are mentioned except for one Course,—viz. £2 10s.; we presume we do not overrate the perpetual ticket in making it £4.

N.B. At several of the schools, as the Aldersgate, London Hospital, &c., a general fee is taken, at a considerable reduction.

REMARKS

ON THE

PRESENT STATE OF IRISH MEDICAL CHARITIES.

To the Editor of the Medical Gazette.

Sir,

The late Report of Dr. Borrett on the state of the medical charities of Ireland, published in the pages of your valued journal, must be viewed by English practitioners with surprise and astonishment. The existence of such a state of medical affairs has now been incontrovertibly established, and with a greater degree of weight and confidence than could be attached to the report of any local practitioner, the value of which, as prefatory to a more extensive investigation of the subject, is too obvious to require my dwelling on. Abuses the most extensive, negligence the most culpable, have been clearly proved; and I trust on a more general review of the subject, to a portion of which it is possible Dr. Borrett's ambulatory commission did not extend, to demonstrate as clearly, that professional treatment, inferior to that of the darkest ages, or medico-chirurgery in its earliest infancy ever produced, is daily practised at our dispensaries, an epitome of which I think indispensably necessary to a just appreciation of, and a more intimate acquaintance with, the inutility and really injurious operation of those charities, although apprehensive, in this age of professional attainment, it might be viewed as the creation of fancy.

If an opinion relative to the civilization of Ireland, and its degraded position in the scale of social existence (as advanced in a learned editorial article in a late number of the Medical Gazette), is to be based on the state of her medical charities, the estimate, without any great stretch of privilege, must be extended to parties who, as members of an enlightened, a learned profession, support but indifferently enough its character for respectability or learning; for, after a most extensive and intimate survey of the state of our dispensaries, I am firmly convinced their debased state cannot be attributed to the condition of the applicants, or solely to the careless indifference of the managers, but is to be chiefly imputed to the physicians and surgeons of those establishments, who could in a very considerable degree, if not altogether, counteract the negligence and supineness of the moral governors, were they to rouse themselves from that state of apathy and indifference to the comforts and healthful existence of the people committed to their charge, that so suddenly and incorrigibly usurps the place of an ephemeral zeal, which scarcely forced them through a hurried and imperfect education. Were they lovers or cultivators of science, and acquainted with medicine and surgery in their present advanced state, they could never hope to combat disease without the aid of those valuable medicines whose character practical experience has long since established, or those active remedies which modern discoveries have placed at our disposal. But slaves to a wretched empiricism, and prepossessed with a fatal but convenient faith in the powers of a single medicine, or two at most, being sufficient for the radical cure of every disease, they slumber in unlettered ease, satisfied with, nay, conceiving more than sufficient, that knowledge hastily acquired during a few winter seasons of metropolitan residence. This is sufficiently evident from the paucity, the unvariedness, and vile description of the medicines usually found in those hovels, which are so badly calculated to afford relief to the unfortunate applicants; some of whom, being a certain description, of farmers recommended by their landlords, or any other subscriber, are not altogether uneducated, who, to a person familiar or intimately acquainted with their habits, manners, and dispositions, which cannot be acquired without a residence amongst them, appear shrewd, intelligent, and discriminating, appearing quite as conversant with ordinary acquirements and newspaper intelligence as their superiors. This description equally applies to the tradespeople, and extends, with some limitation, even to day-labourers, all of whom occasionally become the subjects of dispensary relief, are living on terms of most intimate intercourse and familiarity, discussing medical affairs when grouped around their firesides as freely as politics, drawing their conclusions after their own peculiar fashion, but, of a truth, seldom erroneously; canvassing the merits and demerits of the dispensary doctor and his practice with as great a degree of freedom and warmth as those of the Prime Minister, and, if worthy of such feeling, bestowing on him all that sincere and ardent affection so characteristic of the Irishman.

When illness invades the habitation of one of those people, or the member of a family becomes the subject of accidental and severe injury, recourse is immediately had to his own resources or those of his friends, and a variety of domestic remedies indigenous to the country, or pro-

cured at a sufficiently low rate from the shop of an apothecary in some neighbouring town—medicines usually had recourse to on the invasion of every disease—are freely administered, as it may suit the wish of the sufferer, or accord with the views of some old crone pretending to superior and mysterious skill in those matters, but, as often happens, without success. Long-continued disease, and consequent loss of employment, involve the unhappy sufferer, and perhaps a numerous family, in unparalleled and hopeless destitution. Now the victim of despair, application is made to the local dispensary; but what relief can be afforded from its resources? None. The patient submits to a repetition of drenching with a farrago of rotten trash, remedies superior to which he has already used, and places reliance on advice equally rotten, musty, and ineffectual—advice emanating from the head of some Esculapius, whose intellect, from a long oblivion of medico-chirurgical matters, and a diligent pursuit of other objects, has been rendered rusty and threadbare. Professional incapacity, as usual, ends in failure of success; and this so very frequently occurring, begets a distrust and want of confidence on the part of the applicants in our dispensaries, which fully accounts for the infrequency of attendance on advertised days, mentioned in Dr. Borrett's report. Numbers of those fancied incurables might be daily seen migrating to the habitations of other distant practitioners, whose more successful practice and superior attainments have established for them a respectable reputation, most of those invalids returning restored to health, and rendered useful members, if not to society at large, at least to their own immediate friends.

I have known numerous instances where those people walked one hundred miles for relief, and successfully, submitting to operations with a heroism instigated alone through a determination to rid themselves of disease at all hazards—diseases not comprehended, and operations which could not be performed, at the district dispensary. Even while the writer was penning this article, a young man was brought to him from a distance of thirty miles with fracture of the humerus, extending into the elbow-joint, passing during his journey through a country containing six dispensaries; and when inquiry was instituted of his father why he did not seek assistance at one of those institutions, he unhesitatingly declared he considered the injury of too serious a nature to commit to the management of a dispensary doctor.

Such are the impressions on the minds of the people, such their faith in the relief and assistance afforded at our medical charities, where they witness disease, except of the most ordinary nature, allowed to commit unrestrained its destructive ravages; indeed, with such evidences before them, any other feeling would pourtray an obtuseness of intellect which does not form a feature in our national character. What more successful result could be anticipated, when the medical attendant, viewing his dispensary appointment as a snug sinecure, an unalienable property, spends his days without restraint, indulging in the allurements of the Irish chase; and a prince of good fellows, devoting his nights to potations of the native, enlivening the festive board, or delighting the members of a union hunt with the variety and melody of his songs, and shallowness of his wit; loudly expatiating on the properties of the Irish fox-hound, depicting the beauties of a previous chase, and describing the various incidents of superior jockeyism and hairbreadth escapes during their last run, from the moment reynard first breaks cover, to the death, with a delight and vividness of description, that proves this to be his dearest, his all-absorbing study.

A devotion to such pursuits must alienate their minds from a close attention to the arduous duties of a profession; and the more usual result is, for those gentlemen still holding their dispensary appointments, to settle themselves in life as farmers—to be seen from morning to night directing the movements of the plough, or as amateur cattle feeders, horse jobbers, and road makers, to be seen at every country fair anxiously learning the prices of swine and black cattle, attending with punctuality every turnpike meeting, and, with an ill-timed zeal, aping the ostensible public character at the sacrifice of the professional, to the no small amusement of the country gentry, who are unavoidably driven to the conclusion that his skill and taste lie more in the Macadamizing some public highway than in the practice of medicine.

To dwell much longer on this subject, would be, I fear, to trespass on your indulgence, and the patience of your readers, the field for investigation being a most extensive one: were I to treat of the management, or rather mismanagement, of every local dispensary, it would afford matter for a report too voluminous, as a single article, for the pages of your very valuable journal. And as the medical management of the Infirmaries of Cork has received a well-merited eulogium in the report of Dr. Borrett, to which the writer can bear ample testimony, the medical officers of those establishments being gentlemen of

respectability and acquirements, leaving them and the charities whose destinies they wield, to enjoy the honuors of a well-earned and richly-merited reputation, I shall, for the present, as a melancholy contrast, direct your attention to the abject state of an unfortunate and fallen brother, as a view of its medical operations will elucidate what must be the state of those charities in more retired districts, and enable your readers to appreciate the subject with greater clearness and justice. I am now about to bring under review an hospital (not a county hospital) combining in one establishment a dispensary, fever hospital, with a wing of the building set apart more especially for surgical cases, altogether well calculated, from its architectural arrangements, to meet the object for which it was destined, and, under better auspices, might be rendered a valuable establishment, spreading its sanative influence over a wide extent of country, and conferring blessings which would prove incalculable; but withering under the deleterious influence of a blind and besotted party spirit, which, ever reckless of evil consequences when goaded by the ungenerous desire of supporting some favoured object, in open violation of the claims, the calls of humanity, in this instance, benumbs the feelings of all parties to the sacred duty imposed on them, of rendering the hospital committed to their trust extensively useful to the suffering applicants, and causes them to rest satisfied that every thing connected with the establishment should savour of indolent inactivity, and to permit those funds committed to their charge—funds more than sufficient to meet every exigency, and for one of the most sacred purposes—to be frittered away without credit to the establishment, or benefit to the public. The financial arrangements of such an hospital are much to be deprecated; but when, to perfect the picture of ruin, professional incapacity must be added, an accumulation of evil is heterogeneously amassed, the extensively felt, and destructive effects of which, must be apparent to every individual. Here all is empty parade, and within its walls the usual empirical routine of treatment is adopted, in short, being a soil congenial to the growth of the principle of infallibility: in one or two remedies, every disease incident to human nature is encountered with the same all-powerful drench, quantities of which, from an old crock, are daily ladled out to the various applicants, with bowels already too much relaxed from a diet of potatoes, sour milk, and salt fish, or from a too free use of some domestic purge, previous to application: is it to be wondered that patients indiscriminately subjected to such a regimen, without any appreciable benefit, should fly from the diabolical mixture, as they call it, to seek that relief from the house of some private practitioner, which the believer in one universal remedy was unable to afford? The natural result is a disinclination on the part of the people, except in cases of the most urgent and extreme necessity, to apply for relief, or enter the wards of such an hospital; and when unavoidably forced to become interns, a want of confidence and distrust on the part of the patients in the medical attendant exists, but little calculated to afford relief to one party, or satisfaction to the other, every circumstance concurring most effectually to frustrate the benevolent intentions of the charity. The medical treatment of this hospital must be too apparent, from the general tenor of this paper. Of its surgical arrangements I shall give but a brief sketch, in which I have to present the subjects of simple fracture of the middle third of the thigh, as recovering with considerable shortening and a bowed state of the limb, causing a deformity which renders the unhappy sufferer ever afterwards a cripple; fracture of the fibula, recovering with a lameness, and evil consequences resulting from the maltreatment of such an accident; fracture of the clavicle, treated with a pad placed on the prominent end of the fractured bone, and the other arrangements quite in keeping with such erroneous views; dislocation of the lower head of the tibia forward, undetected, or at least no attempt made at reduction, and the injury left to the unaided operations of nature; disease of the eye, very prevalent amongst the poor, totally neglected and misunderstood, left to run its fearful course unchecked, and to terminate with most melancholy and wretched results; the operations of surgery never performed, and those whose diseases require operation left to pine in suffering or seek assistance as chance might direct, or the reports of some distant and more gifted practitioner might attract them. Such is an epitome of the practice of an hospital in the South-West of Ireland; and blush, oh, ye monopolizing guardians of Irish surgery, who uphold the principle that all appointments of trust and consideration are to be committed to your safe keeping, to the exclusion of all other surgeons, that such practice could emanate from one of your boasted Licentiates; and turn with disgust from the page, as I do from the subject, that in this age of professional advancement such practice could emanate from the veriest tyro. During this posture of affairs, I fear the endeavour to reform the Irish medical charities will prove a Herculean labour. However, as the spirit of

reform is beginning to dawn on us, we anxiously look forward to the result of the late investigations as leading to that reform which is so imperatively called for; some such measure having been long and severely felt as indispensable to the establishing our Irish Dispensaries on a more respectable and useful footing.

HIBERNUS.*

Co. Cork, Sept. 19, 1836.

ORIGIN OF THE LATE CAMBERWELL MEETING.

LETTER FROM MR. CRISP.

To the Editor of the Medical Gazette.

SIR,

FOR many reasons I feel reluctant to enter into a correspondence with Mr. J. F. Hulbert; but I am compelled to reply to the misstatements contained in his letter, published in your last number, and I cannot better refute his assertions and insinuations than by giving a brief account of the origin of the meeting which took place at Camberwell; and it is as follows:—

The Poor-Law Commissioners recommended the Governors and Guardians of the poor of Camberwell (Peckham and Dulwich are both in this parish) to abolish the parochial surgeons, and form a medical club in their stead. The said Governors and Guardians (without first consulting the medical men) framed a set of rules, and sent them to all the practitioners in the parish. In this prospectus it is stated, "that the poor will have the satisfaction of feeling that they will no longer be supported by *charity* [a blank space is left for donations and subscriptions], either in sickness or in health, and they will *then* become *independent*. All domestic servants whose wages do not exceed 12l. are to be physicked for 4s. per annum. A mechanic receiving 35s. per week, to pay *for himself and wife*, 5s. yearly. A single man, earning 25s. per week, 4s. &c. &c. &c. The medical attendant to find medicines. No person whose wages exceed the above shall become a member, except consent in writing be expressly given by the managing Committee." [This Committee is composed solely of eight clergymen.]

A few gentlemen, the greater number of whom, I have since learnt, acted without at all considering the matter, sent in their names as supporters of the scheme (*conditionally*, however).

The Governors and Guardians next invited the medical practitioners of the district to meet them at the Poor House (September 7th); but the former, thinking that the affair principally concerned themselves, retired into an adjoining room, and, after discussing the subject, it was agreed that the meeting should be adjourned till the following Tuesday, when the medical men residing in the Camberwell district and its *neighbourhood* should be invited; and a note to this effect was given, by Mr. Bristowe, the chairman, to Mr. Manico, the secretary: but, by some *unaccountable* accident, the word *neighbourhood* was omitted. Before these circulars were sent out, I had been invited; and as I heard that it was the wish of all present at the late meeting that the practitioners in the *neighbourhood* should attend, I mentioned the circumstance to a few friends, and also to Mr. Waterworth (who, on a late occasion, took the chair at Mr. Hulbert's house), whom I knew to be favourable to the plan, and requested him to make it known to the gentlemen whose opinions coincided with his own.

And now, sir, on referring to the list, it will be found that twenty one of the gentlemen *are residing in the Camberwell district;* and I may add that *all* the dissentients spoke on the occasion alluded to, but only seven of the majority expressed their opinions: it is true that the former said but little, but I presume that they brought forward every argument they could adduce in support of their cause.

I have, sir, in conclusion, to complain of Mr. Hulbert's somewhat invidious mode of writing. I wish he would be *personal* enough to state names, and I dare assert that the *gentlemen* who descended to personalities are prepared to *justify* themselves for so doing, and to prove the correctness of every statement they made.

I am, sir,
Yours respectfully,

E. CRISP.

Walworth, Sept. 27, 1836.

(*Prospectus.*)

CAMBERWELL INDEPENDENT MEDICAL CLUB.

STEWARDS.

The Rev. John George Storie, Vicar of the parish; Rev. H. Melvill; Rev. H. W. C. Hyde; Rev. S. Smith; Rev. E. Lilley; Rev. M. Anderson; J. T. Allen, Esq.; L. B. Allen, Esq.; C. Baldwin, Esq.; Mr. S. Beale; J. Brett, Esq.; T. B. Burbidge, Esq.; J. Capes, Esq.; Mr. J. Deacon; C. Dodd, Esq.; R. A. Gray, Esq.; C. Harden, Esq.; R. Hichens, Esq.; W. Hichens, Esq.; Mr. G. Marshall; A. Nairne, Esq.; J. Pew, Esq., R. Pope,

* We have altered the signature for a reason which our correspondent will understand.—E. G.

Esq.; S. Pope, Esq.; E. Puckle, Esq.; S. Richardson, Esq.; R. Thomas, Esq.; J. Williamson, Esq.

Treasurer, .—Honorary Secretary, .—Collector, Mr. T. Prebble, 13, Southampton street.

The attention of the working and labouring classes is called to the formation of a medical club in this parish—the objects of which are, that all the poor families may have medical and surgical attendance and medicine during sickness, without recourse to parochial aid. The poorer classes, who are invited to belong to this club, will have the satisfaction of feeling that they will be no longer supported by *charity*, either in sickness or health, and will *then* become *independent*.

It is intended to discontinue the attendance of the present parochial medical officers, as regards the parish engagement, *and no medical relief after 25th March next will be afforded out of the workhouse;* it is therefore deemed advisable to form the club *immediately*, that it may come into full operation at *Lady-day* next. The principle upon which the club is founded, is, that all the labourers should belong to it, and each will have annually to subscribe according to family, as under-mentioned—the payments to be made half-yearly.

The following medical gentlemen have consented to attend the members and their families when ill, viz.:— * * *.

The inhabitants generally are reminded that the formation of this club will save the parish several hundred pounds per annum, besides having the effect of restoring to the English peasantry a feeling of independence, and creating a proper dread and dislike, as well of a parish workhouse, as parochial relief.

RULES OF THE CLUB.

I. The members shall consist of labourers and servants in agriculture, or in handicrafts and trades, both male and female, strictly belonging to the working classes. But no domestic servant receiving more than *twelve pounds* annual wages, nor any artizan, handicraftsman, or other workman, receiving more than *one pound five shillings* per week wages, or whose earnings, together with those of his children under sixteen years of age, exceed *thirty-five shillings* per week, shall be permitted to be a member of this club, except consent in writing shall be expressly given by the stewards.

II. Each member, on admission, shall pay six months' subscription in advance, and shall then be entitled to the benefit of the club; and the same amount shall be paid half-yearly in advance, at Lady-day and Michaelmas; and the accounts of the club shall be annually balanced at Christmas.

III. Members may be admitted at any time, on paying the full subscription for the *current* six months *in advance:* the *next* payment becoming due at the ensuing Lady-day or Michaelmas, as the case may be.

IV. Every individual without a child, shall pay annually, 4*s.*; every widow or widower with one child, 5*s.*; every man and wife, 5*s.*; every man and wife with one child, 6*s.*; every man and wife with three children, 8*s.*; every man and wife with four children, 9*s.*; every man and wife with five children, 10*s.*; and be entitled to receive all requisite advice and medicine from such one of the medical attendants as the member may select.

V. The children of members above sixteen years of age (unless they be idiots or helpless cripples) shall not be included in the subscription of the family, but must pay for themselves as independent members.

VI. The wife of a member may be attended during her confinement, on paying to the Collector of the Club ten shillings one month before the time at which she expects to be confined; and may select her own medical attendant from the gentlemen before named.

VII. A man and his wife may be permitted to subscribe for themselves alone, but not for their children alone, nor for any child separately; if they subscribe for any one child under sixteen years of age, they shall subscribe for all their children under sixteen who may reside under their roof, according to Rule IV.

VIII. Any member may be permitted to subscribe for his aged and infirm parent or parents (if unable to support themselves, and residing with their son's or daughter's family) on the terms prescribed for a man and his wife and children under sixteen; that is, counting the parents as children.

IX. No candidate who is actually ill, or any one of whose family is ill at the time of his or her application, shall be admitted a member, unless he or she procure two healthy persons to enter at the same time, each paying the current half year's subscription in advance; or unless he or she pay such admission fee as the medical attendant shall deem an adequate consideration for the attendance and medicine which such candidate, or any part of his or her family, may require in his, her, or their *then* illness. After admission on such terms, the annual payments shall be the same as those required for other members of the Club.

X. Each member shall on entrance, and also at the time of paying his subscription, name the medical gentleman by whom he

wishes to be attended for the ensuing half year, and no member shall be at liberty to change his medical attendant, except at such time.

XI. Sick members shall furnish their own bottles and bandages; and when able shall attend on the medical man, who will visit them at their own houses when they are unable so to attend.

XII. Habitual drunkards, and persons notoriously addicted to profligate habits, or who are known to be idle and disorderly, and individuals convicted of felony, shall not be admitted members of the Club, or if admitted, shall not be allowed to continue members.

XIII. Every dispute or disagreement which may arise shall be referred for arbitration to the stewards, and their decision thereon shall be final.

XIV. The name, age, and residence of each member, shall, on admission, be entered in a book by the collector, with the name of the medical attendant whom the member may then select, and this registration shall be renewed every six months, when the member pays his subscription.

XV. All subscriptions shall be paid to the collector on the days named in Rule II.; and if any member shall fail to pay his or her subscription for the space of *one fortnight* after either of such days, he or she shall cease to be a member; and no member whose subscription is in arrear shall be entitled to receive medical aid from the Club.

Any person thus disqualified, may, at the discretion of the stewards, be permitted to renew his subscription, and to become a member, on payment of a fine of one shilling, and conforming to the Rules II. and III.

XVI. The subscriptions of members shall be paid over by the collector to the treasurer as they are received, and the stewards will settle with the medical gentleman whom the members have respectively elected to attend upon them, every six months, by paying the amount of subscriptions received under Rule IV.

WAX MODELS OF SURGICAL ANATOMY.

We have seen two very fine models, just imported by Mr. Schloss, of Great Russell Street, which we think are well deserving the notice of the profession. One represents the male pelvis, viewed laterally, shewing the urinary and genital organs, with the parts affected in inguinal and femoral hernia. The interior of this model displays the pelvic viscera *in situ*, together with the kidney and ureter, the course of the abdominal aorta, of the common internal and external iliac vessels, with the distribution of their branches, the abdominal rings, with the spermatic vessels and vasa deferentia.

The second model presents a side view of the male pelvis, shewing the reflection of the peritoneum around the viscera. Here, also, we have an excellent representation of the descent of a large scrotal hernia, dissected and slit open, so as to display its coverings and contents.

Models of this kind must be invaluable to teachers of surgery; while, as specimens of art, they must secure the admiration of all who inspect them.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN SEPTEMBER.

John Charles Langmore, Finsbury Square.
Thomas W. L. Martyr, London.
James Surrage, Wincanton.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Sept.* 27, 1836.

Age and Debility	20	Insanity	1
Apoplexy	3	Jaundice	1
Asthma	10	Liver, diseased	4
Cancer	1	Measles	6
Consumption	36	Mortification	1
Convulsions	17	Paralysis	1
Dentition or Teething	1	Rheumatism	1
Dropsy	6	Small-pox	7
Dropsy on the Brain	9	Sore Throat and Quinsey	1
Fever	2	Stone & Gravel	1
Fever, Scarlet	2	Thrush	1
Heart, diseased	2	Unknown Causes	10
Inflammation	11		
Bowels & Stomach	2	Casualties	9
Brain	2		
Lungs and Pleura	2		

Decrease of Burials, as compared with the preceding week . . 56

NOTICES.

Mr. May's letter is an advertisement.

"Medicus."—A letter professing to state facts should always be authenticated. By the way, the letter signed Medicus, to which our notice of last week referred, was dated from the Borough.

"A Camberwell Practitioner," too late for this number.

"T. G.'s" letter also reached us too late.

The Aylesbury "Handbill," given in a recent number, was stated, *by mistake*, on our wrapper, to be put forth by one of the surgeons of the Bucks Infirmary.

To several correspondents we have apologies to offer for the temporary postponement of their papers. Next week we trust to make amends.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 8, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture II.

On Medical Evidence in general — Coroners' and other Courts — Mode of Examining Witnesses — The Siting System — Quoting Authorities — Question of Privilege — Conduct of Medical Witnesses.

Before we enter on the consideration of those special questions which constitute the main business of Forensic Medicine, it may be well to dispose of certain generalities connected with the subject. From what was stated in the last lecture regarding the nature and objects of this study, it will have been gathered that one of the chief ends of medico-legal proceedings is the giving of evidence in courts of justice: it would seem, therefore, advisable, in the first place, to take a view of those relations in which the medical practitioner stands, in respect to our legal tribunals.

COURTS OF JUSTICE.

The courts of justice in which the presence of medical witnesses is most usually required, are those of a *criminal* jurisdiction—as the coroner's, and the oyer and terminer sessions,—or those for the redress of *civil* injuries—such as the common law courts, and the ecclesiastical. Of the former, or criminal kind, that which makes by far the most frequent demand on our services, is the coroner's court.

Coroner's Court.—The circumstances under which a medical man may be summoned to appear in this court are either *general*—such as might lead to the attendance of any other witness, to depose, for instance, to certain matters of fact of which he may happen to be cognizant—or *special*, as when he is expected to give his professional opinion. This is likely to be understood henceforth better than it has been hitherto. Until recently there was no difference observed betwixt summoning a medical, and any other witness. The professional man, when called upon, came, of course, but he frequently exercised a discretion: he answered all ordinary questions, and acted in every respect as a common witness; but when asked his opinions, or requested to open a body, or to analyze toxicologically the contents of the stomach, he usually declined, till he was assured of a remuneration for his medico-legal services. This, however, was what the coroner had it not always in his power to give, and much unseemly squabbling was the consequence—the medical man insisting on his fee, and the coroner endeavouring to extort the witness's opinion without one. The case is now altered. A recent enactment (6 and 7 Will. IV. c. 89) secures to medical witnesses a fee of one guinea for simple attendance, and two where a *post-mortem* inspection, or a chemical analysis, is required. But the medical man must take care that he is *specially* summoned on these occasions, for an ordinary subpœna leaves him only in the condition of an ordinary witness, when he may seek in vain for his fee. The special summons runs in this form:—By virtue of this my order, you are required to appear before me and the jury, on such a day and hour, to give evidence touching the cause of death of * * *, and to make, or assist in making, a post-mortem examination of the body, with [or without] an analysis, [as the case may be] and to report thereon at the said inquest. Signed by the coroner.

There are some points connected with

the coroner and his court, to which medical men in general do not sufficiently attend. The coroner is an officer of much power and authority. He has an extensive discretion in summoning witnesses, and ample means of enforcing their attendance. He sits as a judge, and if the finding of the jury lead to ulterior proceedings, he binds over the parties who have given evidence, to be forthcoming, and to repeat their testimony at the next assizes. His court, though it frequently be not a very showy one, the jury consisting in general of persons from the humblest classes of society, is essentially of high importance. In most cases of felony, such as manslaughter and murder, the initiative is taken in this court, and the person of the party, who by the inquisition is found guilty of the crime, is secured and committed for trial.

A medical man not duly impressed with these facts, is likely to fall into a serious predicament. He is summoned, we shall suppose hastily, and attends, it may be for the first time, in such a court. He finds the jury a set of very humble individuals, assembled perhaps in an ale-house. The circumstances are any thing but imposing. He is off his guard, and gives evidence, probably, very different from what he would have given, had he attached more importance to the proceedings. In due time, another scene follows. The witness has been bound over to appear at the assizes, and has had an opportunity in the interval of deliberately forming his opinions of the case. He then appears before a very different tribunal, and is anxious, no doubt, to make a respectable figure before the bench, the bar, and the neighbouring gentry who fill the court. His examination proceeds, and he utters his sentiments with a becoming caution: he has probably forgotten or thought no more of the obscure scene of the inquest, and the evidence he gave on that occasion. But the judge is watching him; the depositions given at the inquest are before his lordship, and are narrowly compared with the present testimony of the witness. In accordance, too, with the new Prisoners' Counsel Act (6 and 7 Will. IV. c. 114), those depositions are also in the hands of the prisoner's advocate. It may well be conceived in how peculiar a situation the medical man is placed, should his second thoughts prove at variance with those hastily given in the first instance, and especially if through *his* means the prisoner have been thrown into gaol, perhaps for months, on a charge of which it now turns out that he is not guilty. Nor will the compunction of the medical witness be lessened by the consideration, that, had he died between the inquest and the trial, his depositions might have led to the condemnation of the accused!

Courts of Oyer and Terminer.—By this title we are to understand those courts of commission, or assize, in which crown cases, such as treasons, felonies, and misdemeanors, are disposed of. Medical evidence is frequently required in such cases, but the professional witness has no express or special summons: he is subpœnaed, and obliged to appear, under a heavy penalty; when in court, he must "true answer give to all such questions as are put to him," nor has he any claim to remuneration for his time and trouble in attending. An act, however, was passed a few years since (7 Geo. IV. c. 64), by which witnesses for the prosecution, in all cases of *felony*, are entitled to their reasonable expenses: in prosecutions, also, for *certain misdemeanors*, the same indulgence is granted; the misdemeanors being enumerated in the 23d section,—among which we find assault with intent to commit a felony, riot, breaches of the peace, wilful and indecent exposure of the person, &c.; cases in which medical testimony is often required, but without any special privilege or immunity for the professional witness.

Courts of Common Law and Equity.—In these courts, constituted for the redress of *civil* injuries, the witness is differently circumstanced from what he is in *criminal* cases. Where a civil suit is pending, such as an action for damages, a witness need not obey the subpœna unless his reasonable expenses be previously tendered. He must be compensated for his trouble and loss of time in going to, staying at, and coming from the place where his testimony is to be given; otherwise he need not appear: or if he does come into court, he may refuse to give evidence until his reasonable demand be satisfied. His demand, however, must be very reasonable, for a *shilling* is the stated viaticum (a sum fixed at a time when money bore perhaps twenty times its present value) if the witness reside within the bills of mortality, and be summoned to give evidence within the same. Whether *medical* men have a right to compensation for the sacrifice of professional emolument, incurred by their absence from home, is by no means a settled point: there are some cases reported in which they have been put on the same footing as attornies, but even the attornies' right has been shaken by some still more recent decisions.

Ecclesiastical Courts. — The only other courts which I shall notice at present, are those which take cognizance of injuries of an ecclesiastical nature. Here questions relating to the validity of marriage and the grounds of divorce are enter-

tained; cases which call into requisition the evidence of medical referees perhaps more frequently than the public are aware of. Many of the circumstances submitted to the profession, in cases of this kind, would doubtless scandalize public decency. But, on the other hand, there is much to regret; it is to be feared that justice suffers; and, at all events, it cannot but be prejudicial to medico-legal science, as well as to the practice of the bar itself, that reports of some of the most remarkable cases should not in some shape be preserved. The sanctions for attendance here are similar to those used in the common law courts; but in their dealings with medical witnesses, the parties engaged in suits ecclesiastical are understood to be bounteous, as, indeed, might be expected from the suitors in a court where few, save the wealthiest, can venture to litigate.

MEDICAL EVIDENCE.

We shall now suppose the witness in due attendance, sworn in the usual manner, and prepared to tell the "whole truth." May he always do so? Does the discretion of revealing the entire truth rest with him?

The sifting system.—The freedom of a witness in an English court of justice is greatly circumscribed. He is subjected, it is true, to several processes, such as those of examination, cross examination, and re-examination, besides, most likely, being questioned by the bench and jury,—all with the express or ostensible design of eliciting the truth. But does it follow, after all, that the *whole* truth is elicited? To warrant such a supposition we should be satisfied that the examining parties are fully capable of appreciating the extent of knowledge of the witness, which, where the latter is a man of science, it is not always easy for them to be. That the case is often otherwise we may be readily induced to believe, from the circumstance of able witnesses sometimes feeling obliged, through conscientious motives, to submit further information to the court after all the processes of *sifting* them have been finished. How many men, in such a situation, would feel deterred from volunteering one word in addition to what had been wrung from them in the ordeal they had undergone!

Much has been said of the excellence of the methods adopted in our courts for obtaining evidence, and Blackstone has placed in a strong point of view the superiority of parole over written testimony. "The open examination of witnesses *viva voce*," says the learned judge, "is much more conducive to the clearing up of truth than the private and secret examination taken down in writing before an officer, or his clerk, as in the ecclesiastical courts, and all others that have borrowed their practice from the civil law,—where a witness may frequently depose that in private which he will be ashamed to testify in a public and solemn tribunal. There, an artful or careless scribe may make a witness speak what he never meant, by dressing up his depositions in his own forms and language; but he is here at liberty to correct and explain his meaning, if misunderstood, which he can never do after a written deposition is once taken. Besides, the occasional questions of the judge, the jury, and the counsel, propounded to the witnesses on a sudden, will sift out the truth much better than a formal set of interrogatories previously penned and settled; and the confronting of adverse witnesses is also another opportunity of obtaining a clear discovery, which can never be had upon any other method of trial. Nor is the presence of the judge, during the examination, a matter of small importance; for, besides the respect and awe with which his presence will naturally inspire the witness, he is able, by use and experience, to keep the evidence from wandering from the point in issue. In short, by this method of examination, and this only, the persons who are to decide upon the evidence have an opportunity of observing the quality, age, education, understanding, behaviour, and inclinations of the witness; in which points all persons must appear alike, when their depositions are reduced to writing, and read to the judge in the absence of those who made them; and yet as much may be frequently collected from the manner in which the evidence is delivered, as from the matter of it." All this must be admitted to be just and true in respect to the mode by which the knowledge of mere matter of fact may be arrived at; but it may be fairly questioned whether the sifting method here described is best adapted for eliciting valuable scientific opinions.

I am by no means disposed to advocate the course pursued in France and some parts of Germany, of drawing up medico-legal evidence wholly in writing—a system the palpable abuse of which is so clearly shewn in the lengthened and prolix documents to which it often gives rise, amounting sometimes to the production of controversial pamphlets; but I do say, that the opposite practice which prevails amongst us, of confining the professional witness to mere *verbal statements*, controlled, too, by men of a different profession, and who are acknowledged not to be, generally speaking, persons of very extensive scientific attainments, is a course extremely open to objection.

Citing of authorities.—But this is not all: the medical witness is subject to still fur-

ther restriction on another point: he is often prevented from citing authorities. He may not state the opinions of the greatest names in medicine in corroboration of his own—no vouchers, whether ancient or modern, for the correctness of his assertions, may be tendered, if it so please the bar and the bench. It is not easy to conceive any thing more absurd or unfair than this; for, in the first place, it is perfectly ridiculous to expect a medical man, in giving evidence, to state nothing but what he knows through his own experience: were professional witnesses always limited to this, their utility in courts of justice were scanty indeed,—for who could, or should, venture to offer an opinion on any difficult point of diagnosis or practice that has not been adopted from, or confirmed by, the experience of others? If given as purely his own, all rational men must know what value ought to be set upon it. Nor is the unfairness—the injustice of the practice — less striking: for the members of the legal profession should, of all men, be aware, and are aware, that individual opinion is worth nothing unless it be shown to be in accordance with precedent, and consistent with reason, that is, as the lawyers usually understand it, consistent with the expressed sentiments of the Cokes, the Hales, and the Eldons, of their profession.

This was well pointed out on one occasion by a medical witness whose quotation of authorities was demurred to. At the trial of Mr. (afterwards judge) Cowper, for the murder of a lady who was found drowned, Dr. Crell, among other witnesses, was called upon for his opinions as to the likelihood of death being caused by drowning, little or no water having been found in the body. "My own opinion," said Dr. Crell, "is, that a very small quantity of water, not exceeding three ounces, is sufficient to drown any body; and I believe that the reason of the suffocation, or of any persons being stifled under water, is from intercepting of the air, that the person cannot breathe, without which he cannot live. I shall give you the opinion of several old *authorities* on the point." The judge (Baron Hatsell): "Pray, Doctor, tell us your own observations." "My Lord, it must be reading as well as a man's own experience that will make any one a physician; for without the reading of books of that art, the art itself cannot be attained to. Besides, my Lord, I humbly conceive that in such a difficult case as this, we ought to have a great deference for the reports and opinions of learned men; neither do I see any reason why I should not quote the fathers of my profession in this case, as well as you gentlemen of the long robe quote Coke upon Littleton in others." And, accordingly, he proceeded to cite the authority of Ambrose Paré on the point in question; nor was such evidence in this instance refused.

On the other hand, when at the trial of Donnal (in 1817), Dr. Neale quoted the celebrated chemist Thenard, the judge (Abbott) objected, saying—"We cannot take the fact from any publication; we cannot take the fact as related by any *stranger*."

But there seems to be no fixed rule on the subject: while some judges have thus prevented, others have permitted the citing of published opinions, and have sometimes themselves appealed to authorities—to Dr. William Hunter, for instance, or to Haller, or Mead. Nay, on one occasion, when a medical witness flippantly uttered an opinion in court to the effect that the information in certain medical works on a particular subject was good for nothing — "that the writers of books would advance any thing,"—the judge (Dallas) reprimanded him, and said that he would not sit in a court of justice and hear science reviled, and the recorded researches of the medical world represented by ignorant tongues as leading only to uncertainty*.

The objection commonly urged by lawyers seems to amount to this, that opinions and statements laid down in books, however eminent the authors, are only like so much hearsay evidence, not sworn to, and therefore not legally admissible. The unreasonableness of such a doctrine is obvious; for who shall assert that the deliberately published opinions of a respectable author are in any manner the weaker for not being confirmed by an affidavit; or that his statements are the less to be relied on for not being sanctioned by an oath? Some would even hold the very reverse.

In Scotland a greater latitude is allowed to professional witnesses: authorities are permitted to be freely quoted; and Dr. Beck informs us that in America no objection to such a course has ever been made. "There is scarcely a case of any note," says he, "where medical testimony has been required, in which frequent reference has not been had to medical works. They are quoted and commented upon by the bench, the bar, and the professional witnesses."

Notes to aid the memory.—There is another point on which the practice of our English courts is better defined, and apparently founded on more just principles. I allude to the *notes* which the medical witness is sometimes permitted to make use of. It is agreed that where those notes

* Amos; MEDICAL GAZETTE, vol. vii. p. 613.

have been made immediately upon the occurrence of the facts to which they refer, they may be used in evidence, for the express purpose of *refreshing* the witness's memory. Thus the account of a *postmortem* examination drawn up by the witness at the time it was made, or the memoranda noted down presently after a transaction in which he has been engaged, are admissible afterwards in evidence. But where a person summoned to give his testimony in a court of justice relative to incidents that have happened, perhaps many years previously, sits down and compiles a written statement of what he knows or recollects of the matter, he will not be allowed to avail himself of such statement at the trial.

Want of attention to these points has often led witnesses into unpleasant difficulties: ridicule and reprimand, too, have been the lot of some who have come into court confidently relying on the complete proofs they had to bring forward, these proofs being probably memoranda neither made by themselves, nor under their inspection. It is not absolutely necessary that the memoranda alluded to should be noted in one's own hand; but in such case it is indispensable that the witness should have personal cognizance of the act of making them. If they be entries in registers which are adduced, the witness must either have made them himself, have seen them made, or be able to produce the parties by whom that office has been performed.

All this is calculated to inculcate the importance of carefulness on the part of our profession, and to recommend the practice of keeping journals or memoranda of the transactions in which we may be personally concerned. As we are interested in the peace and security of families—as we are friends to humanity and justice—and as we value our own reputation, we are called upon not to omit so simple, yet so important a custom.

Even a prescription book has sometimes been serviceable in the absence of other documents. Mr. Amos informs us that in a case in which he was engaged, where the trial was concerning a *will*, a physician was able to throw great light upon the inquiry by means of a book in which he copied all his prescriptions, and which enabled him to trace the progress of the testator's health at a distance of more than a dozen years, when otherwise it is probable that his memory might have afforded him no assistance*.

Evidence of *dying declarations*, of which medical men frequently become the depositaries, can scarcely be given in an unexceptionable manner if the witness have neglected to take a contemporaneous note of them in writing. That hearsay evidence is not admissible in our courts, is the general rule; but there is a marked exception in the case of dying declarations. What a person utters in his dying moments, or when he entertains a consciousness of approaching dissolution, is valid as evidence upon trials for murder. The principle is a just one, for it implies that the awful situation of the dying individual is equivalent to the sanction of an oath, and that the absence of sublunary interest, on passing into another world, dispenses with the necessity of a cross-examination. But it must clearly appear that such is the condition of the party; if there be hope, however faint, of recovery, —if there be expectation that the adoption of further remedies may prolong life, the declarations will be rejected. This was the case in respect to Mr. Scott, who was shot in a duel. The surgeon who attended him on his death-bed was about to give the dying declarations of his patient when the trial came on at the Old Bailey; but inquiries were first made as to the precise state of the patient, and whether any conversation had passed from which the sense he entertained of his situation could be inferred. The witness said, "The deceased asked me if his wound was necessarily mortal? — upon which I told him that his case was one of extreme danger; but that there had been instances where persons had recovered under such a wound. The deceased then said, 'I am satisfied.'" The declarations were overruled by the judges, inasmuch as the language of the surgeon had probably kept alive in his patient's mind some hopes, however faint, of recovery. And in another case, where the dying declarations had already been duly taken, but the patient afterwards wished that more medicine might be sent for, they were rejected, because not made after all expectation of life was extinct.

One or two other hints on the subject of dying declarations may be added—namely, that these forms of testimony should always be purely voluntary, and that the dying person ought not to be *induced* to supply matter of accusation against living parties. The interrogations also should not be of a *leading* kind, or such as require from the declarator only a simple expression of assent or dissent—a *yes*, or a *no*; for this may be fairly construed into a prompting of statements in which, though the patient may have acquiesced, he cannot be supposed to have felt any adequate concern. Besides, such a practice of questioning is only allowed in open court, under certain precise restrictions.

* Medical Gazette, vol. vii. p. 547.

Question of privilege.—Having thus noticed the extent to which medical testimony is received as evidence, and the limitations to which it is usually subject, it may be interesting to inquire whether medical men have any peculiar privileges in courts of justice. In the first place, may they decline to give such evidence as would appear to compromise the honourable confidence reposed in them by families? Are they privileged not to divulge secrets professionally and confidentially communicated to them? This question has been decided in the negative. In the case of the Duchess of Kingston, who was tried for bigamy, in the year 1776, the professional attendant of her grace, Mr. Cæsar Hawkins, endeavoured to evade some questions put to him, on the ground that if he answered them, he would dishonourably betray his patient. But it was held by the House of Lords, in the language of Lord Mansfield, "that a surgeon has *no privilege*, when it is a material question in a civil or criminal cause, to know whether parties were married, or whether a child was born, to say that his introduction to the parties was in the course of his profession, and in that way he came to the knowledge of it. If a surgeon was *voluntarily* to reveal those secrets, to be sure he would be guilty of a breach of honour, and of great indiscretion; but to give that information in a court of justice, *which by the law of the land he is bound to do*, will never be imputed to him as any indiscretion whatever." Other decisions have since corroborated this view of the question; and it is now generally understood that professional confidence, as a ground of secrecy, can only be urged in the case of counsel, solicitors, and attorneys, when employed as such,—on the principle that in such circumstances they become identified with their clients.

There is one privilege, however, which medical men possess—namely, that of not being obliged to state any thing that may criminate themselves. All witnesses, indeed, by the laws of England, are entitled to the same right of reserve; but peculiar indulgence in this respect seems to be extended to our profession. It is well known that a medical man who attends a party engaged in a duel, and is present at the combat, though only in his professional capacity, is considered in the eye of the law as an accessary, and may be put on his trial for murder. After the fatal duel between Col. Montgomery and Capt. Macnamara, in 1803, a surgeon of eminence who had attended one of the parties professionally, was arrested and sent to Newgate, by a warrant from the civil power, as a principal in the alleged murder, having been present on the occasion, and antecedently privy to it: nor was he liberated from prison till the grand jury were satisfied that there was no sufficient ground for the indictment. But it rarely happens that the law, in this respect, is severely administered: the more ordinary practice is to dispense with the evidence which the medical attendant could give in such cases. On the trial of Mr. Patmore, second to Mr. Scott already mentioned, the surgeon who attended the deceased at the duel, was summoned to identify the prisoner then in the dock, arraigned for murder. And he would have heedlessly done so, had he not been humanely warned by the judge not to expose himself to a criminal prosecution, by answering questions which might compromise his safety. A few years since, at the trial of the seconds of Sir John Jeffcott, who shot Dr. Hennis, of Exeter, in a duel, a physician who was on the ground with the party, being called upon to give evidence, declined to do so, and the judge (Patteson) said he could not compel him.

CONDUCT OF MEDICAL WITNESSES.

I have already alluded to the importance of circumspection on the part of medical men in giving evidence — no matter how humble the court may be in which it is tendered: for if it lead to the committal and subsequent trial of the prisoner, the depositions will be forthcoming, and contrasted with the mature testimony of the witness. But there are some other hints respecting conduct, which it may be well to observe.

Self-possession. — We should beware of being over-officious, or too profuse in giving our testimony, for thereby we expose ourselves to the imputation of some motive, perhaps of a personal nature, in the issue of the cause. Nor, on the other hand, should we be too reserved—too costive, in our information, for this throws us from Scylla into Charybdis, and we become liable to the suspicion either of shallowness, or a design to conceal from the court some important particulars. The golden medium, in this as in most other things, is to be preferred. We should reply freely and cheerfully to the questions proposed to us, with self-possession, but with perfect submission to the tribunal before which we stand. Self-possession is necessary, for the consequence of its absence may be serious. "A scientific witness," says Dr. Paris, "fully acquainted with the subject in dispute, and by his particular knowledge well qualified to inform the court on the most important points, is too frequently rendered miserable to himself, and absolutely ineffective to the ends of justice, by the diffidence which a man of real

acquirement generally feels, when impressed at once with the novelty of his situation, a sense of the importance of the duty which he is about to perform, and a consciousness that the truths he is about to utter may be obscured, suppressed, or perverted, by technicalities for which he is unprepared with any defence: we do not mean to arraign the present forms of examination in general, when we assert that some abuse in practice too frequently places the witness in as painful a situation as if he were himself a criminal."

Technical terms to be avoided. — But it is not of the technicalities of the law alone of which the medical witness had need to be apprehensive; those of his own profession, if not guarded against, will most probably entrammel him quite as much. Both for counsels' sake, who are said to be generally "very shallow men of science," and for our own safety, which so much consists in the integrity of our reputation, we had better abstain from the use of terms purely medical, where we can find others more popular that are at all suited to our purpose. The advice of my learned friend, Mr. Amos, on this point, is excellent. "When in the witness-box, drop as much as possible the language which is known only to scientific men, and adopt that which is in popular use. If you have occasion to speak of a person fainting, do not say, as I have heard it said, that you found the patient in a state of *syncope;* and you must not expect a court of justice to understand you if you talk of a person being *comatose*, and of the appearance of his stomach after death being *highly vascular*, or of your having discovered poisonous ingredients in his intestines by means of a *delicate* test. The judge and counsel are generally very shallow men of science, and it is a great advantage for them to raise a laugh at persons whom they would represent to be using hard names for common things. Veterinary surgeons are a great game for counsel; and I remember, in particular, a veterinary surgeon, who, when cross-examined by Serjeant (now Baron) Vaughan, was so unfortunate as to make use of the term *suspensory ligament*, which the serjeant interpreted into the 'hangman's noose.' In general the witness is called upon to define, as he goes along, the technical terms which he employs, and it is ludicrous sometimes to hear the words of which an explanation is gravely demanded. I have heard a learned chief-justice ask what the witness meant by an *injection*, where the context would seem scarcely to leave a loophole for doubt: the reply, however, that it was a *clyster* appeared satisfactory to his lordship; not, perhaps, because the Greek name was more intelligible than the Latin, but that the former was the more common, and it was probably the wish of the court to discountenance all technicality. Of the opening for ridicule afforded by the use of certain terms, I cannot give you a better instance than one which was lately related to me by a friend learned in the law. A conceited shallow witness, a member of our profession, in undergoing the ordeal of cross examination, on a recent occasion, happened to drop, among other ill-assorted terms which he seemed proud to use, the word *dyspepsia;* the counsel, who was a wag, immediately seized on it, and raised roars of laughter at the witness's expense, by putting to him a question which he was unfortunately unable to answer — "Unde derivatur *dyspepsia*, Doctor? Eh, Doctor, unde derivatur *dyspepsia*?"

Ought witnesses to be made up for the occasion? — A general subject of complaint brought against medical witnesses, is the contradictory nature of their opinions, as given in courts of justice. Much of this, no doubt, is owing to the difficulty of the questions on which those opinions have to be delivered: but perhaps still more to the witness's want of preparation. Of the necessity for individual preparation there cannot be a doubt, when it is considered that the professional man is not called upon to testify to mere matter of fact: he has an opinion to deliver, and will be expected to state publicly the grounds of that opinion. Nor does there seem to be much more question regarding the propriety of joint preparation, when two or more witnesses are to be examined, touching the same subject of inquiry. Of the correctness of this position we have a strong proof in a case related by Dr. Percival. "Several years ago, a trial of considerable consequence occurred, relative to a large copper-work; and two physicians of eminence were summoned to the assizes to bear testimony concerning the salubrity or insalubrity of the smoke issuing from the furnaces. The evidence they offered was entirely contradictory. One grounded his testimony on the general presumption that the ores of copper contain arsenic, and consequently that the effluvia proceeding from the roasting of them must be poisonous, because arsenical. The other had made actual experiments upon the ore employed in the works under prosecution, and on the vapours which it yielded: he was thus furnished with full proof that no arsenic was discoverable in either. But the affirmative prevailed over the negative testimony, from the authority of the physician who delivered it: an authority which he probably would not have misapplied, if he had

been antecedently acquainted with the decisive trials made by his opponent."

That medical men are expected to make due preparation for giving ample and satisfactory testimony, is certain, at least in some instances, from the fact of the judge who has to try particular cases, having given directions to medical witnesses to make certain experiments on animals previously to the day of trial; a fact which serves to establish the principle, if, indeed, there could be any reasonable doubt of the excellence of the practice. The only point in connexion with the subject, on which a question can feasibly be raised, is as to the extent to which the minds of the witnesses should be made up anterior to the trial; for some have advised that they should come to a fixed decision, so as to prevent the possibility of differing when the investigation came on in public. But even were this practicable, it seems doubtful how far it were just and proper; for what would it amount to other than to inquire with a foregone conclusion, and thus to make a mockery of justice?

The practice usually observed with regard to medical witnesses in courts of justice, allowing them to remain during the trial, while other witnesses are secluded till called to give their testimony, is a still further proof of the wish of the court to obtain consistentevidence from the medical men. But it is curious to observe, that, in Scotland, the professional witnesses are *secluded* during the trial, for the very same purpose. "In the Scotch courts (says Mr. Alison, in his Practice of the Criminal Law) it is usual, when one medical man begins to give an opinion on the case, to cause the other medical men to retire. The reason of this is, that it has been found, by experience, that medical men, even of experience and information, are generally so prone to contradict each other, or to adhere to the side on which they are cited, that it is never safe to let them hear each other's testimony. The proper way to do, therefore, is to allow the medical men who are to be examined as to opinion, to hear the whole evidence relating to the facts, whether from the ordinary or the medical witnesses, and to remove them as soon as medical opinion is about to commence."

Of the mischievous absurdity of venturing into court to give evidence without previous preparation, I cannot close this part of my remarks without offering one or two examples. A man was indicted at the Assizes at Chelmsford, in March 1822, for having administered *copperas* to two women. The women had drunk two or three cups of tea, which tasted bitter, and in the evening were taken ill with a violent vomiting. Next day their tea was still bitter, and some copperas was found on a plate in the house. One of the women suffered from the effects for about a month afterwards. It was attempted to be proved on the trial that copperas was *a deadly poison*, as laid in the indictment. A chemist of the town gave it as his opinion that the substance was not, properly speaking, a deadly poison, for the stomach would reject a dose sufficient to produce death before it would have that effect, and probably it would require two ounces, dissolved in water, to produce serious consequences; but still he did not think it would cause death. A physician, however, of Chelmsford, gave it as his opinion that *two drachms* of copperas would cause death. But on his cross examination, it turned out that he was confounding copperas with verdigris; and he was obliged to confess his ignorance that copper did not enter into the composition of the poison alleged in the indictment!

This, it may be said, was an instance of pure indolence: the blunder of the physician was, perhaps, wholly attributable to his having gone into court without giving the slightest attention to the point on which he was to be examined. But I shall now show that too much care cannot be bestowed on preparation, and that even the most expert cannot calculate upon having it all their own way on these occasions. In the example I am about to adduce, we find a chemist of the highest reputation unexpectedly called upon to put forth his best abilities in his cross-examination by counsel. The gentlemen of the bar, it may be observed, are sometimes more than a match for the most intelligent witnesses who come before them; being often *crammed* for the purpose: and the conflict under such circumstances is always unequal. The professional witness is held to be fair game; and he is supposed to have no cause to grumble, as he is attacked on his own ground, and with weapons like his own. On the other hand, the counsel, whatever be the issue of the contest, comes off scatheless: and he has no risk of character to apprehend even from an exposure of gross ignorance in his cross examination.

At the trial of Stewart and his wife, in 1829, for the murder of a man, by giving him laudanum in strong ale, Dr. Ure, who had attended the post-mortem examination of the body, was summoned as a witness for the prosecution. The Doctor was positive as to the presence of opium in the contents of the stomach, from having relied on perchloride of iron as a test for meconic acid, and procured what he conceived to be the *characteristic* cherry red colour. He

did not know at the time (though, by the way, the fact was then far from new, Tiedemann and Gmelin having published it some years before) that the test he employed was rendered doubtful by the circumstance that human saliva contains a substance—the sulpho-cyanuret of potassium—which strikes the same red colour with the same salt of iron,—as indeed it is now perfectly well ascertained that there are other matters which might easily happen to be present in the stomach—such as mustard, &c.—which would also render the test fallacious, in consequence of their presenting a similar appearance. Dr. Ure, however, not being acquainted with the fact respecting the saliva, was taken wholly by surprise when the counsel for the prisoners urged upon him the inefficacy of his salt of iron test, since sulpho-cyanic acid also struck a cherry red colour, when treated with perchloride of iron. In a paper in Brande's Journal for 1830, Dr. Ure adverts to the facts of the case, and the objection raised by his cross-examiner: — "I was not then aware (says he) that this curious acid (the sulpho-cyanic) existed in the saliva, and I thought it merely a *ruse de plaideur*." There is reason to believe that the "ingenious counsel" was primed for the occasion, by a rival chemist of Glasgow; and probably the point urged might have had much weight, had not the medical witnesses been agreed, that, whatever ambiguity might attend the test employed, the characteristic smell of opium given out by the contents of the stomach, was too perceptible to leave any doubt on their minds. The moral circumstances of the case, besides, were very strong; so that the prisoners were found guilty, and executed.

General demeanour.—A few words on the general demeanour of witnesses, and I have done. It has been already seen how many difficulties beset the path of the professional man in coming in contact with our legal tribunals, and I have just noticed some of the perplexities and annoyances which may await him in court. It is scarcely surprising that the apprehension of the sort of treatment which they have reason to expect, should render most men "tremblingly alive" to their position, and that some should even be betrayed into intemperate or indignant sallies: but Dr. Haslam's suggestions are well deserving of consideration:—"The lawyer's object is the interest of his employer, and, for the fulfilment of his duty, he is frequently compelled to resort to a severity of investigation which perplexes the theories, but more frequently kindles the irritable feelings, of the medical practitioner. The distrust on the part of the lawyer, however unpalatable, is fully justified, most witnesses going into court with the preconceived intention of *proving* to a certain extent; and those most conversant in the history of human testimony have been extremely scrupulous of admitting it as a uniform truth until it has been carefully sifted. Guarded with these precautions, and armed with professional experience, the medical practitioner may approach the tribunal of justice with confidence, and advantage to the cause of truth. However dexterous he may shew himself in fencing with the advocate, he should be aware that his evidence ought to impress the judge, and be convincing to the jury."

Unhappily there are but too many instances on record of this disposition on the part of medical men to fence with the gentlemen of the bar: in some cases a contest in "the flowers of Billingsgate" has been attempted; the result has always been to be deplored. But I shall forbear to bring such examples before you, however powerfully they might serve as a warning to remain on all such occasions cool, steady, and collected; and to impress you with the necessity of keeping your temper. To the danger of assuming an affected manner, or the appearance of false dignity, I need hardly advert; it is hazardous at any time to venture before the public out of one's proper character; in a court of justice it may be ruinous. In short, the golden rule of conduct seems to be—to preserve our natural manner—to have just so much confidence as may arise from the consciousness of being not unprepared—and, above all things, to be calm.

ON THE

THERAPEUTICAL EFFECTS OF IODINE,

GIVEN IN VERY LARGE DOSES,

In the forms of Iodide of Starch, Hydriodic Acid, and Iodide of Potassium.

By Andrew Buchanan, M.D.
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In a former number of this journal (vol. xviii. p. 515) I pointed out a new method of administering iodine, by means of which it may be given with safety in doses much greater than by the ordinary modes of administration. I likewise described the principal physiological effects resulting from the use of iodine in such doses. I am now to attempt the more difficult task of forming an estimate of the virtues of iodine in the cure of disease, in so far as the observa-

tions made in the surgical wards of the Glasgow Infirmary enable me to do so.

The principal surgical diseases in which iodine was prescribed were syphilis, sibbens, scrofula, ulcers depending upon constitutional causes, noli me tangere, cancer, and tumors. It was also tried in lepra, psoriasis, ichthyosis, impetigo, and porrigo, diseases not usually treated in the surgical wards, the patients being in the hospital for other diseases, or having been taken in for the express purpose of trying the efficacy of the remedy.

Of 37 patients to whom, on looking over the hospital journals, I find iodine was administered in one or other of the methods described above, it would be useless to give the cases of the whole, because several of them, from the ambiguous nature of the diseases with which they were affected, from other medicines having been previously employed, or from the iodine not being fully tried, do not furnish any satisfactory conclusions. I shall mention only those cases in which the disease was clearly marked, and the efficacy of the iodine fairly tried.

Secondary Syphilis.

I shall first mention four cases of secondary syphilis.

Archibald M'Gillivray, æt. 24, shoemaker. January 7th, 1836: Contracted syphilis about three years ago. Since this, secondary symptoms have been obstinate, notwithstanding four or five complete courses of mercury, two of which he underwent in this hospital. About a year ago a node formed on each tibia, and some time afterwards one appeared on the ulna of the right arm. An eczematous eruption broke out on the face in July last: it was removed by means of sarsaparilla and mercury, but reappeared about three weeks since on left superciliary ridge and chin. The node on left tibia becoming painful, red, and fluctuating, eight days since he had it laid open by a free crucial incision.

On admission the wound has an unhealthy appearance; granulations are glassy, and discharge consists of brown pus, tinged with blood. Surface of tibia is bare, rough, and irregular, in centre of wound, for the space of about half an inch in diameter; and a probe passes outwards beneath the integuments for a short distance. General health good.

Jan. 8th. — Sumat ter indies Iodidi Amyli, ℥ss., ex haustu Decoct. Aven. Curet. Ulcus, Ung. Oxid. Hydr. Rubr.

13th.—Iodine agrees well, and urine strongly impregnated with it.

Augeat. dosis Iodid. Amyl. ad ℥j. ter indies.

20th.—Fresh eruptive patches on nose and right leg; node on left tibia and right ulna diminished in size, and free from pain. Medicine agrees well, only it renders him costive, for which he has had a laxative several times.

Feb. 20th. — About eight days ago salivation and swelling of the face came on. Since yesterday has spat upwards of a pint of saliva, which is as strongly impregnated with iodine as the urine. Two small ulcers on inside of left cheek; nodes gone, and eruption where ulcerated has now healed; sore of leg looks better, but there is still bare bone in the centre of it.

Ossi nudato adhibeatur Acid. Muriatic. Dilut.

March 12th. — Salivation subsided soon after last report, and sore of leg healed very speedily after the bare bone had been dissolved away by the muriatic acid.

Dismissed cured.

James Kilpatrick, æt. 34, flesher. March 30th: About three months ago observed several warty excrescences forming around anus; his attention being called to them in consequence of the irritation they produced. A week or two afterwards observed purulent matter exuding from below prepuce, and, on examination, he found superficial ulceration behind corona glandis. On admission ulceration is still found in this situation; discharge is thick pus. Prepuce is somewhat swollen, and orifice contracted. On scrotum, body of penis, inside of thighs, and around anus, is an eruption of ulcerated patches, which appear to have commenced in slightly elevated round spots, about half an inch in diameter; these became excoriated on the surface, and, by coalescing, have assumed irregular forms in several places. The discharge is thin and sero-purulent; parts are the seat of considerable itchiness; throat is in a state of superficial ulceration, and right tonsil is much enlarged. Scattered over the body and upper extremities are a few blotches of a coppery hue. Had

gonorrhœa about three years ago, but denies ever having had chancres before. Never used mercury.

March 31st. — Sum. ter indies Iodid. Amyl. ℥ss. Fieis circa anum et ulceribus scroti adhib. Vapor Iodinii, et postea Ung Periodidii Hydr.

April 29th.—The dose of iodid. amyl. was increased to one ounce, but it was found to occasion looseness of bowels; he has therefore taken it for the most part in ℥ss. doses. All the symptoms of the disease for some time gone.

Dismissed cured.

In the two following cases the iodine was given up, and mercury substituted, on account of the venereal eruption not going away, but, on the contrary, fresh patches of it appearing. I would not now, however, consider this a sufficient reason for stopping the iodine. In the case of M'Gillivray, detailed above, in which a complete cure was ultimately effected, fresh patches of the eruption came out when the patient was fully under the influence of the medicine. Dr. Lawrie informs me that he has so often made the same observation, that he considers the fresh eruption as by no means an unfavourable symptom; and he has further remarked, that it is only in cases of syphilis that any eruption shews itself under the use of iodine.

David Struthers, æt. 32, weaver. December 21st, 1835: Surrounding anus and between nates is a collection of small round superficial ulcers, slightly raised at their margins. The discharge is thin, sero-purulent, and irritating; intervening integuments red and tender. Several ulcers of a similar character are scattered over scrotum and integuments of penis.

Contracted sores from impure connexion about ten weeks ago; these are still open behind glans, near left side of frænum. Disease appeared around anus about nine weeks ago; and about a fortnight ago a lichenous eruption broke out over arms and body, accompanied by itching. No treatment.

Sum. ter indies Iodid. Amyl. ℥ss.

27th.—Medicine agrees well. Urine abundant, and becomes as black as ink on addition of starch and nitric acid.

Ungeat. dos. ad ℥j. ter indies.

January 11th.—For fifteen days took ℥iij. of iodid. amyl. daily: it appeared to render bowels costive, requiring the use of castor-oil. Stools somewhat whitish. Took last dose on the morning of 6th instant; tinge of iodine continued in the urine till fifth day after. Little change upon eruption or sores.

Rep. Iodin. sed Sum. solummodo, ℥ss. ter ind. Curent. Ulcera Ung. Iodin.

February 2d.—Iodine has agreed better in diminished doses. Ulcer around anus nearly healed, but little change on blotches of the skin, and two new ones have appeared on scrotum.

Omit. Iodin.—Sum. Pil. Hydr. ij. V. et i. M.

16th.—Cured.

The other case is that of a man (James Hare, Ward No. 12), who was admitted for strumous sores in the groin, originally excited by venereal infection. He was put upon the beautiful new salt of iron, discovered by Mr. Graham — the peroxalate of iron and potass; which appeared to act very effectually as a tonic, and was given in gradually increased doses, till he took of it gr. xv. twice a-day. He was next tried with iodide of starch, which was given at first in very small doses, as he was one of the first patients to whom it was prescribed. The dose was gradually increased, and when he was fully under the influence of the medicine, a copious eruption of blotches took place all over his body. The iodine was in consequence intermitted, and first sarsaparilla and afterwards mercury substituted; under which remedies the cure was effected.

Sloughing Sores of Penis.

Four bad cases of this kind were treated with iodine, and all of them did well. These patients were Smith, M'Kittrick, Norie, and Macdonald; all of them in Ward No. 7. The two first used the iodid. of potassium, in ℥j. doses; the two last the iodid. of starch, in ℥j. doses. It is to be remembered, however, that strong nitric acid as a caustic, opium, and other remedies, were also employed; whence it is very difficult to estimate the value of the iodine. I shall not, therefore, insert these cases, but merely say that my impression was in favour of the utility of the iodine.

In an exceedingly severe case which I saw in private, along with Dr. Black, Kent-street, the iodid. of potassium seemed also to be of service; but the

strong nitric acid being here likewise employed, there was the same room for scepticism.

The only other case of syphilis to which I shall advert is that of M'Gregor, (Ward No. 7); in which mercury was prescribed in the first instance, and to it the cure was undoubtedly to be ascribed. I only mention this case to illustrate the effects of iodid. of potassium introduced by inunction. An ointment was formed, containing 3j. of iod. potassii to ℥j. of lard. With this ointment the patient was directed to smear over the whole surface of the body. He used ℥ss. of the ointment at night, and the other ℥ss. next morning. At the hour of visit, no iodine could be detected in the urine. He was in consequence directed to rub in a whole ounce of the ointment that evening and next morning. In the urine passed in the morning before the second inunction, there was merely a trace of iodine, while in that passed after mid-day it was exceedingly abundant.

Sibbens.

Considering the efficacy of iodine in syphilis, it was natural to infer, from the analogy of the two diseases, that it would likewise prove an useful remedy in sibbens. It was accordingly tried in the following case, and the result was highly satisfactory.

Hugh Macgregor, æt. 33, farmer, Balquhuidder. April 12th: On left side of isthmus of throat, occupying both pillars and the intervening space, and stretching over front of uvula, is a patch of superficial ulceration, with slightly elevated edges and indolent surface, covered with a yellow exudation. Uvula is much relaxed, and from part of the velum on the left side being destroyed, it inclines to the right. Parts in the neighbourhood of sore are of a dusky-red colour. Ulceration appeared about 3½ months ago, and was treated with mercury, with good effect. It did not continue well, however, above a fortnight; ulceration reappearing and spreading to a greater extent than before. Denies all syphilitic taint, and attributes his complaint to eating from the same dish and smoking the same pipe with an infected person. About ten years ago was much troubled with cynanche tonsillaris, advancing on the last attack (seven years ago) to suppuration.

Sum. Iodid. Amyl. ad ℥ss. ter indies.

15th.—Augeat. dos. Iod. Amyl. ad ℥j. ter indies.

May 4th.—Dismissed cured.

Scrofulous Affections of Joints and Bones.

The most formidable diseases of the scrofulous kind which come under the cognizance of the surgeon, are the affections of the joints. The most common of those affections is that which originates in the ends of the bones forming the articulation, by the deposition of tuberculous matter in their cancellous structure. In one case of this kind, the iodide of potassium was prescribed, in the dose of 3ij. daily; but, in consequence of the medicine disagreeing, it was intermitted before any judgment of its efficacy could be formed. It will be seen, however, below, that in diseases of the same nature, only existing in bones not entering into the formation of any large joint, the iodine was decidedly useful. In the scrofulous thickening of the synovial membrane, another disease of the joints not less intractable, and in this part of the country little less frequent than that just mentioned, the trials made of the iodine were unavailing, as illustrated in the following case.

Jane Montgomery, æt. 12. January 19th: Right knee-joint is much swollen, measuring fully an inch in circumference more than left. Form of joint is lost, the shape of patella being obscured in consequence of surrounding tumefaction. Above patella, and also on inside of knee, opposite head of tibia, there is evident fluctuation. These fluctuating swellings do not communicate with each other. There is also a fluctuating spot, small in size, on the outside of head of tibia. Limb partially flexed, and any attempt at extension produces pain. Little or no uneasiness is felt on pressing the articulating surfaces together, nor does pressure on the extremities of the bone excite much pain. Complaint is of about twelve months' duration, and has been treated with counter-irritants, with relief to the pain, but without benefit to the swelling. General health impaired; occasional night sweats; pulse 124.

Feb. 2d. — A blister applied over joint, with diminution of pain; tongue clean; appetite improved.

Sum. Iodid. Amyl. 3ij. ter indies.

18th. — Little change upon knee; elastic swelling on the outside of it less

distinct, while that over inner head of tibia has more feeling of fluctuation. Pulse averages about 125, appetite good, tongue clean. Less pain of knee; medicine agrees well, and urine strongly impregnated with it.

24th. — Three days back, much increase of pain of knee, with increased swelling, and redness of surface; pulse 144; tongue clean, but appetite impaired.

Leeches twice applied to knee, and iodine stopped.

28th.—On 25th, at a consultation, it was recommended to delay amputation, and to puncture the fluctuating tumor over head of tibia. This was accordingly done, and about ℥ss. of curdy matter discharged.

March 15th.—Amputation was determined on at another consultation, but the parents refusing to give their permission, the girl was removed at their desire.

The following case was one of those in which the virtues of iodine were most remarkably exemplified. It will assist the mind in forming an idea of the appearance of the diseased parts, to mention that several medical gentlemen, who saw the case when first admitted, thought that partial amputation of the hand was the only remedy likely to be of any use.

John Elliot, æt. 24, sadler: Aug. 4th. Twelve months ago an abscess formed on back of hand, above the thumb, which burst some time after, giving exit to a considerable quantity of pus. About same time an abscess formed over ball of right thumb, which was opened.

On admission, there exists over hand a large strumous-looking ulcer, interseeted by undermined bands of skin, and secreting thin unhealthy pus. Hand is the seat of considerable aching pain. Through a part of this ulcer metacarpal bone of index finger is detected in a carious state; over ball of thumb are also two openings of the same character, but through neither of these is bone found bare.

Left knee-joint measures an inch more than right in circumference. Swelling principally confined to the bursa above patella; there is apparently but little affection of the synovial membrane around the knee; head of tibia is the seat of a good deal of pain, especially when pressed upon. General health pretty good; diathesis strumous.

Sum. Ol. Ricini, ℥j.; et parti genu dolenti adhibeatur Empl. Mel. Vesic.

Aug. 16th.—Knee much improved by blister; little change in sore of hand.

℞ Iod. Potassii, 3j.; divid. in pulv. xij. Sum. j. ter in dies.

℞ Iodinii, gr. x. Axungiæ, ℥j. M. Fiat ung. quo curet. Ulcus.

Aug. 19th.—Augeat. dos. Iod. Potass. ad gr. x.

Sept. 10th.—Iodine ointment not applied, sores having been dressed with a poultice all along. Has taken iodid. potassii in gradually increased doses, and for a fortnight has taken 3j. daily; medicine found in large quantity in his urine. Sore nearly healed; no carious bone discharged. Continue.

Sept. 14th.—Sores quite healed; dismissed, cured.

In the two following cases the use of the iodine was conjoined with a local application, which appears to me to be of much service in the treatment of many cases of carious bone. I allude to the application of diluted muriatic acid used altogether as a chemical remedy, for the purpose of dissolving away the exposed bone. In this way portions of bone which are keeping up a lingering disease may be removed more speedily than by any other means, save excision. I have already mentioned one instance of an obstinate sore upon the tibia, which was cured by means of the acid very speedily, and certainly with far less pain to the patient than could have been accomplished by the saw or the gouge. I have found an acid of the strength of the acid. muriatic. dilut. of the Pharmacopœias, to have a solvent power sufficiently energetic, and at the same time to occasion very little irritation of the soft parts in the neighbourhood. It may be conveniently applied by means of a long glass tube, which should be about half an inch in diameter, and drawn out at the lower end, so as to be little thicker than a probe; or it may be applied by means of an apparatus like that used in the laboratories for washing precipitates from the sides of the funnel.

John Kenney, æt. 16, piecer. Feb. 6th: About 10 months ago, after a slight injury, right foot became swollen, but without pain, redness, or constitutional affection. A short time afterwards, small abscesses formed on outside of dorsum, and on the sole. Some were opened

by puncture, and others allowed to burst spontaneously. Since this they have assumed an indolent character, shewing no disposition to heal, and discharging thin sero-purulent matter. Through two of those, on the dorsum, diseased bone can be detected. Into one of those on the sole, probe can be passed 1½ inches without detecting bone. The others are more superficial, extending but a short way beneath surface. Experiences no pain or uneasiness in the foot. A small sinuous abscess of a strumous character exists on neck, beneath left angle of the jaw, discharging thin matter, mixed with curdy flakes. Probe passes for about an inch under integuments, which are red and thin. General health somewhat impaired, with occasional rigors, but, he says, no night sweats. Pulse 108; tongue clean.

At a consultation held upon this case, partial amputation of the foot was recommended, but I preferred trying the effect of medicine in the first instance. Half an ounce of the liquid hydriodic acid was prescribed three times a day, and soon after the local application of the dilute muriatic acid was begun. In the course of three weeks the diseased bones were partially dissolved and softened, but the fever did not abate, and the boy's friends, apprehensive of an operation, had him removed from the house.

Ann M'Eachern, æt. 27, March 16th: On left forearm are situated several ulcers, varying in diameter from half an inch to an inch and a half. The largest, situated on the anterior aspect, presents an indolent disc, covered with pale flabby granulations. Edges are sharp, and slightly elevated. The others have thin slightly-livid margins, and are without any appearance of granulations: the discharge which issues from them concreting into yellowish green scabs. Through one, situated over lower third of ulna, probe passes, detecting rough bone, and in June last, a fragment of bone, about two inches in length, was discharged from this spot. Skin of nearly whole of forearm is altered in appearance, from the cicatrization of former ulcers. On left clavicle is a large narrow sore of a similar character, with large one on forearm.

Those on the arm are of several years' duration; that on the clavicle appeared about six weeks ago, from the bursting of a small abscess. Right knee-joint is somewhat swollen, swelling being soft and fluctuating, and presenting itself principally on either side of patellar ligament and tendon of rectus femoris. Patella is raised from the condyles. Motion of joint is unaffected, and disease is productive of little or no uneasiness. It appeared about a year ago, without evident cause. General health pretty good.

Sum. ter indies Iodid. Amyl. ℥ss. more solito.

March 31.—Iodine intermitted, on account of slight febrile attack. Has since recommenced the use of it. Sores somewhat better; ulna still bare.

Ulnæ adhib. Acid. Muriat. dilut. Cont. Iodin.

April 28th.—Cured.

Scrofulous Ulcers all over Body, without Diseased Bone.

Jean Banks, æt. 29.—On left arm are several ulcers, varying in size from an inch to a few lines in diameter. The edges are thin and well defined; discharge consists of thin pus, which concretes into dark greenish-coloured scabs. Integuments surrounding sores of a reddish hue; around left knee-joint are several sores of a similar character. Complains of occasional severe pain in sores, especially those on the leg. No diseased bone can be detected with the probe. Four years ago, sores of a similar kind appeared on right ear and angle of jaw; they healed in about two months. Disease again broke out on nose, left cheek, arms, and legs, which places are completely covered with scars. Has undergone a variety of treatment; general health somewhat affected. Catamenia absent since attack.

Sum. ter indies Acid. Hydriodic. ℥ss. ex. haustu solutionis Amyli. Ulceribus adhib. Cataplasma et post. Ung. Ox. Hydr. rubr.

February 28th.—Sumat. pulv. Rhei c. Magnes. ℥ij.

March 27th.—Sores around knee-joint nearly healed, as well as those on arm. Soon after admission five front teeth of upper jaw were found to be loose, and there is now a discharge of matter from root of second incisor. The hydriodic acid frequently intermitted, on account of irritability of stomach.

Extrahatur dens incisor. Repet. Acid. Hydriod. dosibus, ℥ii. ter indies.

April 12th.—Dismissed, cured.

Specific Ulcers.

Under this indefinite title I do not comprehend the scrofulous and venereal ulcers which have already been spoken of; but certain anomalous forms of ulceration which seem to be dependent upon a defective state of the general function of assimilation, as they derive little benefit from mere local applications, and can only be cured by remedies acting on the system at large. It was in the cure of such specific ulcers that the virtues of iodine were most signally displayed.

John Balfour, æt. 20, weaver. January 4th: On ulnar aspect of lower half of left fore-arm is a large irregular ulcer, with slightly inverted edges, and an irritable surface. Discharge is thin, and occasionally tinged with blood. Surrounding integuments slightly discoloured. Sore commenced about four months ago, in the form of a few ecthymatous pustules, which suppurated, burst, and ulcerated, and it has been spreading since by the formation of new pustules around margins. On legs and arms are a few patches of eight days' standing, which have suppurated and scabbed, and seem to be disappearing. Had primary sores about two years ago, with sore throat some months afterwards, which was treated with mercury pushed to salivation. Has at present a muco-purulent discharge from the urethra, which he thinks is of two years' duration.

Sum. ter indies Iodid. Amyl. ʒss. more solito.

Jan. 16th.—About one-half of sore has healed, and the rest looks very healthy. Bowels somewhat bound, and complains a little of pain of belly.

Sum. Ol. Ricin. ʒss.

The sore healed completely not long after above report, when the treatment was altogether directed to the removal of the ecthymatous eruption, which proved very obstinate.

Margaret M'Gillivray, æt. 20, steam-loom weaver. March 1st: On middle and upper third of left leg, and occupying outer and posterior aspects, are several ulcers, varying from a quarter of an inch to fully an inch in diameter. They are somewhat irregular in form; edges thick, white, and elevated, and their surface glassy. The upper one is deeper than the rest, probe passing into a small cavity in its centre for about half an inch; surrounding skin of a livid hue.

Sores commenced eight months ago, in leech-bites, which were irritated by the application of a blister. Denies all constitutional taint.

Cataplasm. Emoll. Sum. ter indies Iodid. Amyl. ʒs. Adhibeatur ulceribus Ung. Iodin.

March 30th.—Ulcers cicatrized rapidly, and are now nearly healed. They have not, however, made any progress for the last ten days, during which iodide of starch has been disagreeing with stomach, and, in consequence, little used.

Intermitt. Iodid. Amyl. Sum. Acid. Hydriod. ʒij. ter in dies more sol.

April 9th.—Dismissed cured.

Jean Macfarlane, æt. 15, servant. April 13th: On inner side of right ankle-joint is a patch of a honey-comb appearance, produced by an aggregation of small ulcers, averaging about one line and a half in diameter. Intervening and surrounding skin is somewhat red and swollen; discs are indolent, shewing little disposition to granulation, and their edges are thickened and slightly elevated. Appears to have had an attack of erysipelas about six months ago, giving rise to present affection.

Catapl. Emoll. Ol. Ricin. ʒss.

April 16th.—Sumat ter indies Iodid. Amyl. ʒss. Curetur ulcus Ung. Nitr. Hydr.

27th.—Dismissed cured.

[To be continued.]

OTIC GANGLION.

To the Editor of the Medical Gazette.

Sir,

I think it necessary to inform you, that since writing the observations which appeared in your number for July 30, 1836, I have discovered the otic ganglion, small but distinct, in the dog. It has only been found once after many dissections, and may, therefore, be considered of rare occurrence in that animal. This circumstance renders it probable that it may occasionally occur in

the cat, although my dissections hitherto have failed to demonstrate it.

I am, sir,
Your obedient servant,
J. H. Bennett.

Edinburgh, Sept. 10, 1836.

LIVING EARWIGS INFESTING THE ALIMENTARY CANAL.

To the Editor of the Medical Gazette.

Sir,

As I have not seen on medical record an instance in which the common earwig was found to infest the intestine of a human being, perhaps the following cases may be interesting to your readers.

Very faithfully yours,
Wm. Griffin.

62, George-street, Limerick,
Sept. 25, 1836.

A young married woman had been complaining for some time of distressing headaches, for which I ordered her some purgative medicine. On my next visit she showed me an insect which she passed per anum. It was the common earwig, and corresponded, in every particular, with the characters assigned to the coleopterous insect of the genus Forficula. Dr. Pickells, many years since, related a very extraordinary case, in the Irish Transactions of the King and Queen's College of Physicians, in which enormous progenies of apterous, dipterous, and coleopterous insects were discharged both by the mouth and anus, but he does not mention the common earwig among them; nor could I readily bring myself to believe so formidable a little animal might infest the human intestine, without symptoms of greater distress and ill health than occurred in this woman's case. She declared to me, however, that she found it alive in the vessel which she made use of on her bowels being moved, and that it was not in it before then. I ordered her one or two doses of castor-oil and turpentine, with some relief to her head, but there was no further discharge of insects.

Considerable doubt might be entertained as to the fact of the insect having been discharged per anum in this instance; and I should perhaps have thought lightly of it, had it not been for another case which my brother had been attending, and which I saw in the course of it, in consultation with him. The following is a copy from his notes on the subject:—

James Naughten, a pale delicate-looking lad, 12 years of age, was brought to the Dispensary, complaining of paroxysms of hysterical crying, with debility and loss of appetite. He was frequently attacked with severe fainting fits, which were often attended with spasms of an epileptic character. His tongue was whitish, pulse quick and weak, no thirst, his bowels quite free, and, according to the account of his parents, not suffering under any derangement.

The symptoms were at first attributed to general delicacy of habit, and he was ordered purgatives of calomel and jalap, and Epsom salts, with bitter infusion. These not appearing to serve him, the purgatives were repeated, followed by tonics. The same treatment was pursued, with some slight variety, for a month or six weeks, but without the least improvement.

At this time his mother brought him to the Dispensary, and showed two insects, which, she said, the boy had drawn from his throat with his fingers. They were of the coleopterous order, and, on examination, proved to be the common earwig. She said he had felt them running about his throat, and putting back two of his fingers, soon felt them passing round the ends of them; he then watched for the moment when they ran between them, and drew them out. They were living, and she described them as so swift that (to use her own words) "nothing could catch them." They died very speedily. She now said he was sometimes attacked with severe pain in the stomach and back of the neck, which he found much more violent than usual lately.

He was immediately ordered half an ounce of the spirit of turpentine, in a draught with mucilage, with directions to give him a dose of castor-oil three or four hours after it. The next time he applied he was a good deal better, and, upon inquiry whether he had seen any more of the insects, he said, when the medicine operated, he had passed "*a hatful of them*," all dead. Another dose, such as the former, with a course of tonics, entirely cured him.

A REPORT

OF THE

SURGICAL CASES ADMITTED INTO THE LIVERPOOL NORTHERN HOSPITAL,

From the 25th August, 1835, to 25th August, 1836.

To the Editor of the Medical Gazette.

SIR,

In the sixteenth volume of the MEDICAL GAZETTE, published in 1835, page 87, you inserted a report of the surgical cases admitted into the Northern Hospital during the preceding year. Will you oblige me by admitting the report of the surgical cases for the last year, in an early number of your publication? In the note accompanying the last report I stated "that it was in contemplation to add thirty beds to the hospital;" this has not yet been done; consequently the number of beds remain the same, viz. thirty-seven. It will not be until October next that the hospital will be increased, when we shall be able to accommodate seventy-six patients.

I remain, sir,
Your obedient servant,
JOHN M. BANNER.

Liverpool, Sept. 13, 1836.

Abscess of the knee-joint	4
Aneurism, popliteal	2
—— —— —— of the aorta, ulcerating above the clavicle	1
Ankle-joint, injury of	5
Anthrax	1
Burns	6
Caries, bones of the foot	3
Concussion of the brain	34
Compression of the brain	3
Contusions of the hip	8
—— —— —— back	7
—— —— —— knee	6
—— —— —— foot	7
—— —— —— arm and shoulder	9
Dislocations of the shoulder	7
—— —— —— clavicle	1
—— —— —— elbow, compound	1
—— —— —— hip into the foramen ovale	1
—— —— —— ankle	2
—— —— —— compound	2
Erysipelas	5
Fistula in ano	1
—— —— perineo	1
Fracture of the skull, with compression	13
—— —— —— without urgent symptoms	1
Fracture of humerus, simple	4
—— —— —— compound	3
—— —— clavicle, simple	5
—— —— —— comminuted	2
—— —— radius and ulna, simple	6
—— —— —— —— compound	2
—— —— ribs	10
—— —— —— with emphysema	4
—— —— pelvis	1
—— —— femur, simple	21
—— —— —— comminuted	2
—— —— tibia, simple	3
—— —— —— compound	1
—— —— tibia and fibula, simple	13
—— —— —— —— compound	12
—— —— fibula, with injury of ankle	5
—— —— calcis, comminuted	2
—— —— metacarpal bones, &c. compound	9
—— —— toes	2
—— —— cuboid bone, compound	1
—— —— patella	3
—— —— lower jaw	2
—— —— scapula (neck)	1
—— —— coracoid process of scapula	1
Gangræna senilis	1
Hernia	5
—— humoralis	1
Inflammation of the inner structure of large joints	7
Iritis	4
Perineum, laceration of	1
Phlegmon and its terminations	12
Polypus uteri	1
Retention of urine	2
Scirrhus mamma	1
Scalds	2
Spine, injury of	2
Suspended animation from immersion in water	7
Testicle, disease of	2
Ulceration of the inner structure of large joints	7
Ulcerated legs	13
Veins, varicose	2
Wounds	14
—— of scalp	12
—— of cornea	1
Total	343

Nature of the Cases.

It will be seen that there were—

247 accidents.
134 fractures;
106 simple,
28 compound.
96 cases of disease.

Result.

Out of the whole number—

284 were cured.
4 dismissed incurable.
27 remain in the house.
28 died.

Occupation.

Of these cases there were—

136 labourers, porters, &c.
95 sailors.
53 masons, carpenters, &c.
59 women.

Country.

156 English; 90 Irish; 38 Welsh; 18 Scotch; 17 Americans; 3 Germans; 2 Swedes; 2 Prussians; 1 Dane; 1 Maltese; 13 unknown.

25 of the patients, when admitted with accidents, were in a state of intoxication.

There have been 29 operations performed during the year: 11 amputations, 9 from accidents, and 2 from disease.

The nature of the Accidents requiring Amputation.

Case 1st.—A man was admitted with compound fracture of the tibia and fibula, a wound extending into the ankle joint, with severe hæmorrhage. On examining the foot after amputation, we found the ends of the tibia and fibula fractured in seventeen places; the anterior and posterior tibial arteries were wounded. During the operation the patient was very faint; the arteries were secured, as we supposed, and the patient placed in bed. He had not been in bed many minutes, when a severe hæmorrhage took place; the tourniquet was immediately applied, the dressings removed, but no bleeding vessel could be seen; the tourniquet was removed, and the hæmorrhage had ceased; the artery was now compressed high up the thigh with the fingers, the pressure suddenly removed, and a large jet was observed from the posterior tibial artery, which was immediately secured. The operation was performed by candle-light.

2d. A pilot had his foot caught in a coil of rope, when his boat was sailing very fast; the foot was nearly torn off, there was severe laceration of the leg, and fractured tibia and fibula.

3d. A sailor fell from the main-mast, and produced a compound fracture of the humerus. The bone was much comminuted, and there was a wound of the brachial artery: the fracture was close to the axilla.

4th. A plasterer fell from a roof, and produced a compound fracture of the tibia and fibula. Close to the knee-joint there was internal hæmorrhage; the leg was much distended with blood, and quite cold; the swelling extended above the knee-joint. A large quantity of blood was effused between the muscles and under the integuments. The anterior tibial artery was wounded.

5th. Is that of a sailor, who met with a similar accident to the last. In this case the fracture extended into the knee-joint, which was also filled with blood.

6th. A child seven years of age was leaning over the side of a flat, at the time another was passing: his arm was caught between the two boats, and completely smashed: it was necessary to amputate close to the axilla.

7th. A Prussian sailor was carrying a heavy box: he let it fall, and with it was precipitated into the hold of the ship. He had injured his back and knee: there was effusion into the joint, and fracture of the fibula close to the knee. There was a clean wound over the cuboid bone, which could be felt fractured. The edges of the wound were brought together with adhesive plaster. For ten days the patient went on well; at the expiration of this time he complained of much pain in the foot, and exhibited symptoms of inflammatory fever. There was a watery discharge from the wound, which was offensive: the wound looked sloughy. The tongue was furred, and he was delirious; the pulse was quick and weak. In a few days a slough formed on the instep, and another over the inner ankle. The calf of the leg felt baggy; an opening was made into it, but without relief; there was the same thin offensive discharge. The symptoms became more aggravated; the tongue was brown and dry; the pulse remarkably quick and feeble. He lay in a torpid state; he would not answer questions unless roused; his breathing was laborious; he had low muttering delirium; there was little or no discharge from the foot; the sloughs had increased. A consultation was held, and it was thought that the patient was not in a fit state to undergo amputation. On the following day the symptoms were evidently more unfavourable, and he appeared to be dying. The tongue was black and quite dry; the voice weak, scarcely audible; the countenance anxious; restlessness of the extremities; the skin dry and hot, which had been the case from the first appearance of slough; the breathing was more difficult, and the pulse was more feeble and

fluttering. A consultation was held on this day. We agreed in thinking that the patient could not long continue in the state he was in; and although we thought that the patient might sink under amputation, yet we agreed in thinking that it gave him the only chance. The friends consented, and the leg was removed. Very little blood was lost during the operation, which was performed close to the patient's bed. He suffered less than might have been conceived, and did not faint: he suffered more in the removal from and to his bed, than from the operation. In twenty-four hours the tongue became moist, the pulse much reduced in frequency, and the countenance more tranquil, and he slept. It is unnecessary to follow this case throughout the cure: it is sufficient to state, that he rapidly lost all his unpleasant symptoms, his health improved quickly, the stump healed kindly; and in five weeks he left the hospital well.

8th. Was a compound fracture of the tibia, near the ankle joint, and fracture of the fibula at its upper third. The patient had been a hard drinker, and was admitted in an intoxicated state. The leg was placed in a junk: he appeared to do well for two days, when delirium tremens came on; this was considerably increased by the circumstance of a rat falling through the ventilator, which was situated over his head: it so alarmed him, that the idea of his being devoured by rats could not be got rid of for three days. By the use of opium and stimulants this affection left him. On the eighth day he was attacked with traumatic delirium: he had violent spasms of the muscles of the extremities and face: this tetanic affection increased, and it was thought proper to perform amputation. When the spasmodic symptoms subsided, he was occasionally affected with delirium. The stump was an unhealthy one; he gradually became weaker; and on the tenth day after amputation died. On examining the leg, after the operation, the fibula was found fractured very obliquely, and the muscles in the neighbourhood of the fracture were dark-coloured and much torn: this probably arose from the restlessness of the patient, and from the spasmodic action.

It will be seen by the list of cases, that there have been eight burns and scalds admitted: three of these died; two severe burns, and one scald, which was accompanied with nervous delirium.

Out of the fourteen cases of fractured skulls, ten died, each within two hours of their admission; most of them in a shorter time. The trephine was not used in any of the cases. On dissection there was found in eight of the cases fracture through the base of the skull, and in all of them laceration of the brain. There was only one case without urgent symptoms: here there was scalp wound, with fracture of parietal bone: slight exfoliation took place in this case, and the patient got well. In the other three cases there was concussion of the brain: these got well. One of the three cases was attended with more interest than the others, and I will relate it.

9th. James Hay, æt. 35, a sailor, was admitted on the 11th September, 1835. He had fallen from the mast of his vessel. He was insensible at the time of his admission. There was great tumefaction over the right temporal and part of the parietal bones. The right eye, and its surrounding cellular membrane, was much ecchymosed; the lower extremities were cold, and there was considerable hæmorrhage from the mouth: this was much increased by a cough which occasionally affected him: the pulse was very low and weak; he had not vomited. Warmth was applied to the extremities, leeches to the temples, and cold to the head. By speaking loudly to him he would rouse, but what he said was quite incoherent. This state of insensibility lasted four days, when he could be more easily roused, though little better understood. He frequently applied his hand to his right ear, and also to his side, which was examined, and the fourth rib was found to be fractured. On the fifth day he complained of pain in the right ear and temple, of numbness of the right side of the face; he had difficulty in putting out his tongue, and experienced difficulty in deglutition; this appeared to arise from pain. He had had a turpentine enema administered two or three times a day; leeches were daily applied to the head, and the cold had been continued. He had continued to part with blood from the mouth, until the fourth day, when he expectorated large quantities of pus. The tumefaction had now

nearly subsided, and a fracture, with slight depression of the upper part of the temporal and lower part of the parietal bones, was very perceptible; the ecchymosis had also subsided in the eyelid: the pupil of the right eye was found much dilated, that of the left contracted. On the application of light, there was not any action of the right pupil: the lid was paralysed. The expectoration of pus continued for a fortnight, and then ceased; the pain in the head gradually diminished, and the numbness of the face was very slight. He could swallow with ease; his memory was perfect, and he was perfectly sensible; the pupil remained dilated, and the lid remained paralysed. This was the state of the patient five weeks after the accident, at which time he was obliged to join his ship.

August 27, 1836.—It is now a year since the above accident took place, and on this day Hay called to see me: he had been a voyage to the East Indies. The depression of bone was more perceptible, and the right side of the head looked quite flat; the pupil of the right eye was much more dilated than the left, but acted freely on the application of light. There was still slight paralysis of the lid; he stated that he had had pain in the right side of the head, and in the right ear, particularly in changes of the weather; and occasionally the imperfection of the vision of the right eye was increased. These symptoms had gradually got less, and at this time he felt little or no inconvenience from the accident.

Out of the 34 cases of concussion of the brain, one died. In this case the symptoms rapidly ran on to those of compression. On examining the head, laceration of the anterior lobe of the brain was discovered.

In the two cases of popliteal aneurism which were operated on, the ligatures came away on the 16th and 18th days. In one of the cases the patient had been cured by an operation for popliteal aneurism on the opposite leg, fifteen months before. When he was admitted into the hospital the first time, it was thought that there was disease throughout the arterial system. He recovered well after both operations, and is again following his employment as an engineer.

The polypus uteri was excised; it was very large; its neck was thicker than a man's thumb; there was not any hæmorrhage, and in a few days the woman left the hospital well.

Of the five cases of hernia, four were reduced; one (femoral) was operated on.

The scirrhous mamma was removed in December 1835. The whole breast was removed; the wound soon healed, and the patient left the hospital. A few days since she returned, complaining of the symptoms usually attendant on scirrhus pylori; she also complained of pain in some enlarged glands in the neighbourhood of the cicatrix.

In one of the cases of scirrhous mamma which was operated on last year, the woman returned in the course of eight months with jaundice; she complained of pain in the region of the liver, and of excessive debility. In two weeks after her admission she died. On dissection we found scirrhous liver, scirrhous mesentery, and the commencement of scirrhous uterus.

The twenty-nine cases that were operated on did well, with the exception of two; one of which was the case of amputation for traumatic delirium; the other was a man who was attacked with peritoneal inflammation after amputation.

CASE OF LATERAL DISLOCATION OF THE KNEE-JOINT.

To the Editor of the Medical Gazette.

Sir,

Enclosed I have forwarded the particulars of a case of lateral dislocation of the knee-joint, being rather an uncommon accident: I beg you will give it insertion at your earliest convenience. The man was a patient of Mr. Andrews, and being one of the house surgeons, the case came under my immediate notice.—I am, sir,

Your obedient servant,

J. B. Samuel.

Vauxhall, Sept. 27, 1836.

Henry Culpit, æt. 30, farrier, was riding a horse home from his employer's on the 22d last month, when the animal became restive, and in rearing, fell, the man being under: he was immediately brought to the London Hospital, when he was found to have sustained the above-named injury. The external condyle of the femur occupied the inner

articulating surface of the tibia, the other forming a considerable projection on the inner side of the knee; there was slight flexion of the leg, with eversion of the foot. Mr. Palmer and myself, the house surgeons for the week, by making extension and counter-extension, easily succeeded in reducing it. The limb was afterwards placed on pillows. It is almost unnecessary to add that it was followed by immense swelling of the joint, which required the repeated application of leeches, warm fomentations, &c., under the use of which it rapidly subsided. There was no constitutional disturbance.

ANALYSIS OF AN ANOMALOUS SPECIMEN OF DIABETIC URINE.

To the Editor of the Medical Gazette.

Sir,

Should the following observations be considered worthy of notice, you will oblige me by inserting them in your Gazette.—I am, sir,

Your obedient servant,

G. O. Rees.

59, Guilford-Street, Russell-Square, Oct. 5, 1836.

A specimen of urine, supposed to be that of a diabetic patient, was lately sent me for examination by my friend Mr. Edinborough. On taking the specific gravity of the fluid, I was surprised to find that it was far *below* the healthy standard, being only 1008.

I was induced to make a particular examination of this specimen, in order to ascertain in which of the solid ingredients of the urine this deficiency occurred; or whether the low specific gravity was caused by a dilution of the secretion, while it retained its *solid* ingredients in normal proportion.

I subjoin the result of analysis, as procured from 1000 grains:—

Water	985·0
Urea	10·2
Extractive soluble in water, not soluble in alcohol—ammoniacal salts	0·9
Alkaline salts	3·5
Earthy ditto	0·4
Traces of lithic acid and vesical mucus.	
	1000·0

The constitution of healthy urine may be represented by the same formula, as follows:—

Water	933·0
Urea	30·1
Extractive soluble in water, and extractive soluble in alcohol and water—ammoniacal salts	18·9
Alkaline salts	16·0
Earthy salts	1·0
Lithic acid and vesical mucus	1·0
	1000·0

It will be remarked on examining these analyses, that the diseased specimen is entirely wanting in the extractive soluble in alcohol and water, and that the extractive soluble in water only, is in very small proportion. The urea, if taken in relative quantity to the solid constituents of the diseased urine, will be seen to exceed by far the proportion which that principle bears to the quantity of solid matter in the healthy fluid. The proportion of alkaline salts, if taken in relation to the proportion of solid matter, will be nearly normal.

This diseased specimen is therefore to be regarded as a dilute urine, in which the urea has entirely supplied the place of the extractive soluble in alcohol and water; and, in part, that soluble in water only. The urea obtained during this examination was so pure, that it crystallized from the first alcoholic solution in perfectly white four-sided prisms.

The proportion of solid matter in healthy urine is 67 grs. in 1000 grs. 30·1 (or less than half) being urea, The solid matter of the diseased specimen under consideration forms 15 grs. only, in the 1000 grs., 10·2 (or more than two-thirds) being urea.

This diseased condition of urine is nearly allied to that mentioned by Dr. Prout in his work on the Urine, &c.; differing only in possessing a very light specific gravity. I am not aware that the entire absence of the extractive soluble in alcohol and water has ever, till now, been shewn in the analysis of diseased urine.

EXTRAORDINARY VERDICT OF A CORONER'S JURY,

IN A CASE OF SUSPECTED POISONING.

To the Editor of the Medical Gazette.

SIR,

HAVING just perused the leading article in your number for the 13th instant, I am induced to send you the following account of an occurrence which came under my observation in this neighbourhood. If it possesses no other value, it will at least prove that there is urgent necessity for the community and the legislature to view with suspicion and distrust the published reports of coroners; and that it is incumbent on them to demand an increased efficiency from these persons, as well as the medical witnesses, in the discharge of their important duties.

On the 28th of last June a surgeon of this place was requested to accompany a medical man, to examine the body of a servant girl, 16 years of age, who had died under suspicious circumstances. The previous evening she retired to bed in perfect health and excellent spirits, about ten o'clock, after making a supper of boiled milk. She was said to have been unusually cheerful in the evening, and had been dancing. About twelve o'clock her mistress was disturbed by her moans, and noise produced by vomiting, and went to her assistance. She was vomiting, and appeared very faint, and said she suffered severe pain at the pit of the stomach. She was conveyed to a window, and being somewhat refreshed, back again to bed,—grew worse and worse, and died, *in the arms of her mistress*, about four o'clock, before medical assistance could be obtained. The stomach, with its contents, was removed; the former presented such decided characters of the effects of arsenic, that any one having an eye practised in the morbid appearances produced by this poison, would have drawn that conclusion; and this was declared by one who saw it, without any acquaintance with the history of the case. The tests for arsenic in the hands of these medical men,—the gentleman who made the cadaveric inspection, and two others to whom he had given portions of the contents of the stomach,—were perfectly satisfactory. From the sulphuret of arsenic obtained, splendid coatings of the metal were procured, and from this, brilliant crystals of arsenious acid. From the quarter of a grain of arseniuret of copper I succeeded in deriving a sufficient number of crystals to form a conclusive opinion of the presence of the poison.

The fact of the presence of arsenic was made known by the surgeon before mentioned to the coroner,—a non-professional individual, but one who has long held the office,—who expressed great dissatisfaction to him on account of his having *presumed* to examine the body before the inquest had been held,—became extremely indignant,—asserted that he was liable to an action for daring, without *his* authority, to examine the body,—and so on.

At the inquest, this individual, from whose lips the coroner had heard, as a positive certainty, that the poor girl was destroyed by arsenic, was not called; and from the (I suppose) coroner's account, which appeared in the Stamford Mercury, which I shall extract, it is probable that the jury were kept in complete ignorance of it.

Extract from the Stamford Mercury of July 8, 1836.

"On Thursday, the 30th ult., an inquest was held at Swinethorp, before R. Bunyan, gent., coroner, on the body of Sarah Maltby, aged 16, who died suddenly, on the Tuesday morning previous. It appeared that the deceased was servant to Mr. Bottomley, and had retired to rest in apparent good health. At about 12 o'clock she was seized with a violent pain in her stomach; her mistress got up, and took her to the window, and, after remaining there for some time, she somewhat recovered, and again retired to rest; but, about four o'clock in the morning, she was *found* dead in bed. Verdict—'Died suddenly.'"

I shall not encroach upon your useful time, sir, by making any comment upon the inaccuracies of the *statement* of the circumstances which is placed before the public; the object is perceptible.—I am, sir,

Your obedient servant,

INDICATOR.

London, Aug. 20, 1836.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

The Botanist; containing accurately coloured Figures of tender and hardy Ornamental Plants, with Descriptions. Conducted by B. MAUND, F.L.S., assisted by Professor HENSLOW. 4to. To be continued Monthly. No. I.

SINCE botany, which, as some are of opinion, never should have been divorced from medicine, of which it has been aptly styled "the hand-maid," has been again included in the curriculum of medical education in this country, various works have appeared, calculated to assist the student in acquiring a knowledge of the principles of the science. Something was still wanting, which, by appealing to the corporeal as well as the mental eye, should take captive, as it were, two senses at once, and so ensure the entrance of knowledge by two loopholes. A work with pictorial illustrations could alone do this. Such a one appears likely to be supplied by that of which we have copied the title above. A good introductory notice explains the nature of the assistance it is calculated to afford; the plates are well engraved, and most exquisitely coloured, while the descriptive letter-press conveys much scientific and popular information respecting the plants delineated. The great peculiarity of this work seems to be, that the objects figured are not, as in other works, regarded as isolated individuals, but as members of the vegetable kingdom, having affinities to other individuals. It therefore leads to the consideration of the principles of the natural method of botany, and induces the reader to take comprehensive views of the plants which come before him, in respect to their organization and physiology. On this account, medical students are likely to feel more interested in it, and it will constitute a valuable companion for them, when pursuing their studies, and a pleasing manual to refer to when settled in practice, and residing, as many will be, if not altogether in the country, at least in houses with gardens attached, where, during their hours of leisure, they may enjoy a delightful recreation in the cultivation of many of the elegant productions of nature, of which they might, perhaps, never have heard, but for such a work as this; the cheapness of which puts it within the reach of every one. To such of our readers as already possess a taste for botany, no further recommendation is necessary; while, for those who are yet unacquainted with it, we do not know any work better calculated to inspire a love for it, and gratify it when awakened.

MEDICAL GAZETTE.

Saturday, October 8, 1836.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

HOMŒOPATHY AND ITS LATE DOINGS.

THE death of Malibran, lamented as it is by the community at large, and as it must be by a great portion of the civilized world, has proved, it would seem, rather a God-send to a small knot of ignorant but mischievous pretenders: mem by whom any kind of notice, even though originating in a calamity itself, must be esteemed as a positive benefit. The disaster to which we regret to have to allude has conferred a transient notoriety, however unenviable, on the *homœopathic* practices; and it was a mere chance that it did not do more. Homœopathy wanted but another step to put it on a footing with the *hygeian* quackery—the publicity of *a coroner's inquest;* a distinction which it had just now nearly obtained.

We do not mean to impugn the judgment of those gentlemen—the committee at Manchester—who decided that an inquest in Madame Malibran's case would have been improper, or might fairly be dispensed with. But we object to such a decision in the abstract:

strict justice would demand, that if the Morisonian manslaughters be exposed and punished as they deserve, the Hahnemannian doings, which also deal insidiously and destructively with human life, should certainly not be screened.

Some gentle reader may, perhaps, suppose that we are too severe on the disciples of Hahnemann: that, at the worst, they are but harmless quacks; and that their doses being infinitely small, are capable, accordingly, of doing infinitely little mischief. We deny the inference, and must insist on the correctness of our principle. The doses, we will suppose for argument sake, are in themselves perfectly innocuous; yet such doses, when given at a moment when energetic practice is required, are fraught with danger; and when an ignorant practitioner, professing homœopathy, rashly takes upon him the responsibility of a critical case, flinging away the moments that are most precious, and on the right employment of which the balance of life or death turns, we say that such a practitioner is guilty of a great crime, and merits the sternest visitation of the law. In acute disease, and cases similar to that of the unfortunate Malibran, the *expecting* practice, as it has been called, or the "leaving all to nature"—even if homœopathy were as harmless as that—were to throw overboard our helm, sheet anchor, and all that might contribute to our safety, and to trust to the mercies of a providence that ever frowns on the inactive.

In the most stupidly savage state of society, nothing more barbarous could be done. When the means of depletion, or lowering the system, on the one hand, or those of stimulating it, on the other, offer the only hope of preservation, homœopathy—taking even the most favourable view of it—sits still and does nothing,—while it promises as much as, nay, more than, if the rules of art, derived from the soundest experience, were duly put in practice.

But homœopathy does not even possess this negative quality on which to rest its defence. It plays upon the imagination of its dupes: it works upon them by certain pretended latent affinities, as Mesmerism used to do in the golden days of animal magnetism: and in this employment of a powerful instrument, for good or evil, it but too often operates mischievously on susceptible constitutions. It may happen, by its intrinsic inertness, to do no harm, but the chances are almost wholly against such a result.

Here, then, is a system, pretending to belong to medicine, to be itself medicine re-organized and reformed—yet playing in the dark, practising secretly, and now and then vaunting of the ineffable virtues of imperceptible particles of matter. How long is medical science, extended and enlightened as it has been of late years, to afford the passport of its name to audacious adventurers thus using it for the vilest purposes? And will a community, ever professing to enjoy the benefits of diffused information, always remain blind to such palpable fraud?

It will, no doubt, be said by some of the brazen impostors who support the scheme, that all this is set forth in ignorance: that Hahnemannism has not got fair play: that prejudice is strong against it, and it has never obtained a trial. This is all false: the system (system!) is perfectly well known as far as it is intelligible: its principles (!) are as thoroughly understood by the generality of well-informed medical men, as by the homœopaths themselves: but what is better still, the fruits of the system, as they occasionally come before the public, are closely observed and appreciated. Dare they deny, too, that they have had fair trial—when, not to

speak of others, Andral, in the largest and best appointed hospital in the French metropolis, afforded every opportunity to the cleverest of the homœopaths, and found that they failed to make good their pretensions?

But what right have they, we would ask, to claim such an indulgence? What have they done to entitle them to so much confidence as to have the lives of patients committed to them for experiment? Let them give us the guarantee of even one physician of eminence, who will assure us that we can conscientiously trust to Hahnemannism in any one case. They have no such surety to offer. Yet here have these medical St. Simonians been for years endeavouring to make a stand, and have produced, after all, nothing better than their Belluomini (by importation), and their Quin: we had almost forgotten—their Uwins, save the mark! When we inquire for their literature, — their knights of the pen — we find their champion in the person of a worthy son of the church, whose talent for invective and the misapplication of texts of scripture, forms his chief claim to public attention. We have had a specimen of him, and can truly say that we congratulate Hahnemannism on the possession of such a mild, meek, discreet, and sagacious partisan. There have been others also, who, like Dr. Uwins, have favoured the world with a silly pamphlet, or a set of apocryphal cases, from time to time; but they have all long since gone down the channel into the *sentina* of oblivion!

And these are the creatures that talk of the envy and prejudice of the medical profession, and who call for a fair trial. It is likely they will have this; perhaps sooner than they could wish. Let them only get possession of another case like the recent one—let the treatment be, as much as possible, like that applied to the unfortunate Malibran—let the remedies be kept secret, and the assistance of eminent practitioners be declined—let only this be done—the catastrophe will be certain; —and we shall warrant them publicity enough. The public will have a right to learn then, who are they that, under the guise of authorized practitioners, tamper with the lives of the liege subjects; and the *coroner* will take care to investigate the matter fully. Nor will it serve the turn of those who may then shrink from the consequences of their doings, to induce the nearest relative of the deceased to quit the kingdom; and to enjoin that the body shall not be meddled with—save for the purpose of burying it with all privacy and despatch. Such things as these cannot again occur. Homœopathy must have a trial; it must have, it has a right to have, the same publicity and attention as has been bestowed on its rival system — that of Morison.

Since the preceding remarks were written, a letter from M. Belluomini, the homœopath who attended Madame Malibran in her fatal illness, has appeared in the newspapers. The *Doctor*, among other weak and silly things, says, that after a careful examination, he found that "the viscera of the chest and abdomen had not been attacked with malady,"—and yet that "the first effect of the medicines was to allay the *cough* a little;" and again, that "some hours after, the fever increased, and the *cough* and delirium returned." We should infer from his account (and unfortunately we have no other) that the ill-fated lady had inflammation of the chest, and was suffered to die *homœopathically*. *Dr.* B., we should further observe, carefully concealing his treatment, says, "I immediately set to work to administer to the patient *those remedies which I thought desirable:*" but not a word as to *what* they

were. He did not wish to meet the highly respectable medical men previously in attendance: "I do not think it necessary," was his answer on being asked to do so! So much for homœopathy, and its fair and open dealings.

AMOUNT OF FEES AT DIFFERENT MEDICAL SCHOOLS.

FROM the note which follows, it will be seen that some gentlemen have misunderstood the table of fees inserted at page 26 of our last number. We did not compare the amount charged at different schools for the shortest period which will enable a pupil to apply for examination at the College of Surgeons or Society of Apothecaries, but our calculation referred to unlimited attendance, because we knew that the great majority of pupils take perpetual tickets for most of the courses, viz. Anatomy, Medicine, Surgery, and Midwifery; and we therefore thought that the most useful table to them would be one showing the expense of unlimited attendance on all the lectures entering into the curricula of the Corporate Bodies. But if, instead of taking perpetual tickets, they confine themselves to the courses absolutely required, then the amount will be somewhat less than in our table. Thus, as stated by Mr. Bayntin, at St. Bartholomew's Hospital, it becomes reduced to 57*l.* 15*s.*; and we may add, that at Guy's the reduction is to 56*l.* 14*s.*; at London Hospital, to 50*l.*; at St. George's, to 49 guineas; the Aldersgate School, 35 guineas, &c. &c.

Our object was to refute the misrepresentations in the Lancet, as to the alleged cheapness of University College, which we demonstrated unanswerably to be by much the dearest school in London. According to the present calculation (*i. e.* of the expense of those lectures merely which the corporate bodies require), the amount is not less than 67*l.* 12*s.* to pupils who have not a nomination, and 63*l.* 2*s.* to those who have. But for Mr. Wakley's advocacy, this disparity might have escaped notice: so much for having an indiscreet friend!

To the Editor of the Medical Gazette.

SIR,

In the tabular view of the Amount of Fees at the different Schools for attendance on the Lectures required by the College of Surgeons and Society of Apothecaries, you have stated the amount of fees at the Medical School of St. Bartholomew's Hospital to be 65*l.* 2*s.*; whereas by the Prospectus of the School it appears that the total expense for the above purposes is 57*l.* 15*s.*

As this inaccuracy is likely to mislead, I write to request that you will correct it in your next number.—I am, sir,

Your obedient servant,

W. J. BAYNTIN,
Curator of the Museum.

St. Bartholomew's Hospital,
Oct. 6, 1836.

ACCIDENTS IN MINES,

FROM EXPLOSIONS OF FIRE-DAMP.

THE public attention is ever and anon painfully called to this subject; yet it is surprising with how little effect. No steps are taken by government for affording protection from the frequent loss of life which occurs in the coal districts, nor do the mine-owners profit in the least by the sad experience they obtain so constantly, of the inefficient means which they have hitherto employed for preventing accidents. Only last week a fresh explosion of fire-damp destroyed eleven persons, at Newcastle-under-Line, where the work was being carried on with common candles: the verdict of the coroner's jury was, "Accidental death." How that can be called *accident*, of which the probabilities are so manifest, is to us an enigma.

It is nearly a year since we made some remarks on this subject, suggesting that a regularly organized board of visitors, or commissioners, appointed at the Home Office, should superintend the safety of the mining districts; and we insisted on the speedy adoption of those lamps which had been proved to be perfectly secure. The government has re-

mained supine in the matter, notwithstanding the strong representations contained in the Report of the Parliamentary Committee: but we are glad to find that a proper spirit has begun to prevail, touching the necessity of guarding more effectually against the explosive gases met with in the collieries. The insecurity of the Davy-lamp in *currents of inflammable air* (the very emergency in which its services would be most needed), has been demonstrated to the conviction even of the most incredulous; and the superior merits of that lamp which stood every test and ordeal to which it was submitted, in presence of the Parliamentary Committee — we mean that of Messrs. Upton and Roberts—are now almost universally acknowledged.

We have derived much satisfaction from the perusal of the subjoined letter from Dr. Fife, of Newcastle: it will be recollected that this gentleman, last year, wrote a pamphlet on the fatal accident which had shortly before occurred at Walsall, and by which above 100 lives were lost in a moment *. Among the preventives which he then suggested, the construction of *perfect* Davy-lamps was dwelt on as of paramount importance. Dr. Fife, at that time, implicitly believed in the perfection of the Davy, if it were only properly made and duly attended to. He even challenged the statement of any well-authenticated case tending to invalidate his opinion. Let us now see his present impressions as expressed in the following letter to the Editor of the Newcastle Journal. We have only to add, that we think the Doctor's candour does him great credit:—

In reading the *Courant* of the 3d inst., my attention was arrested by the subjoined passage in the report of the "Natural History Society," read at its seventh anniversary meeting. The report concluded by enumerating the papers which had been read at the several meetings during the year, and the investigation which had been made of the *Mining Gas* in this district, in consequence of its having been alleged to be of so highly explosive a nature as that the Davy Lamp was not a sufficient protection against it. The result of the examination was, "that no free hydrogen was found, or any other highly explosive gas, against which the lamp in question was not a sufficient protection." To the last sentence of the above extract I shall at present confine myself. As to the constitution and properties of the gas met with in our mines, I believe these were perfectly analysed and as thoroughly understood by the illustrious Davy as by any modern chemist; consequently the non-existence of free hydrogen cannot be regarded as a new discovery. Again, as to the high or low explosive power of any gas of our mines, I believe he was also fully aware that the explosive or detonating power existed only when such gas was diluted to a certain point with atmospheric air, and that when the dilution was either above or below such point, that eminent man knew, though inflammable, the mixture would not explode. He was also aware that a certain degree of atmospheric pressure was essential to detonation. I come now to the most important part of the extract, viz. the assertion "that no gas existed in mines against which the Davy Lamp was not a sufficient protection." Had this statement been made prior to the publication of the evidence taken and the experiments made before the parliamentary committee "on accidents in mines," I should have been less surprised; as it is, I am at a loss to conceive upon what grounds any scientific body could advance such a statement, as the *fallacy* of the Davy Lamp is by that evidence and those experiments fully established. At the time of the parliamentary investigation, no one could believe more firmly in the security of the Davy Lamp than I did; I am now, however, not only from the testimony of *practical miners* and the experiments of scientific chemists, but also from the repetition of those experiments myself, fully convinced of my error, and conceive it to be my duty to endeavour to correct the propagation of an unfounded assertion, the only tendency of which would be to give unwarrantable confidence to the miner, and possibly lead to farther sacrifice of valuable lives.

GEORGE FIFE, M.D.

Eldon-Square, Sept. 15, 1836.

* See MEDICAL GAZETTE, vol. xvii. p. 146.

PROJECTED POOR LAW CLUB AT CAMBERWELL.

To the Editor of the Medical Gazette.

SIR,

FROM the great impartiality with which your journal is conducted, I am induced to send you a few lines respecting the medical club intended to be formed in the parish of Camberwell.

According to the Poor Law Amendment Act, no further medical relief will be given

to the poor of this parish after the 25th of March next, (except in the workhouse): to avert the evils of such a measure, it was recommended by the Board of Guardians, that an independent medical club be formed to attend the poorer classes, for such small sums as they, with the annual subscriptions, might be able to afford. With this object in view, a meeting of the resident practitioners was called, in order to make rules for carrying it into effect, and to divide the parish into districts, leaving the poor the option of selecting any one of the medical men of the district to attend them, upon subscribing a small sum to the club, which sum was to be paid whether ill or well, the scale of charges varying according to the number of the family. Judge, then, of the surprise, not to say indignation, of the resident medical practitioners who were favourable to the measure, upon entering the room, to find it occupied almost entirely by medical men collected from different parts, the majority having no connexion whatever with Camberwell, and whose avowed object was a determination, as one of them expressed it, to crush the measure; applying to those who were willing to lend their support, terms of no measured censure, and making up by clamour what they were deficient in argument; in fact there was not a single argument against the principle; the only word that could be heard 'ever and anon' above the *din and confusion* that prevailed, were *black sheep*, *degrading*, lowering the dignity and honour of the profession; and some gentleman went so far as to talk of posting the names of all who were favourable to the measure; no doubt, in order that "we petty men should walk under his huge legs to find ourselves dishonourable graves," and with a view that we might be denounced by our brother practitioners. After witnessing such a scene as this, pray spare us from hearing any more of the cant about the liberality and honour of the profession. In conclusion, allow me to transmit the names of those who "(to their praise be it spoken)" are willing to lend their assistance to the much abused medical club.

Practitioners favourable to the forming of the Club.

Mr. Bean, Mr. Wm. Bean, Mr. Tobias Browne, Mr. John Browne, Mr. Forbes, Mr. Flower, Mr. Hughes, Mr. King, and Mr. Young.

Unfavourable.

Mr. Bowen, Mr. Bristowe, Mr. Massey, and Mr. Scrimshire.

It is proper to state that I confine myself to the *Camberwell district*, leaving out the Peckham and Dulwich districts; also the Walworth, Blackfriars' Road, London Road, Kent Road, Trinity Street, Union Street, Blackman Street, and Newington, thinking it absurd to suppose that any of the medical men residing in the omitted districts would be appointed to attend the Camberwell district.

In order to guard against any misapprehension, I beg to observe that the names stated as favourable, are those given in to the Guardians, as fully agreeing to the principle; and it was their intention to have made some required alterations in the scale of remuneration, as well as to have excluded domestic servants in situation, and to have reduced the scale of eligible members, from those receiving 35*s*. a week down to 25*s*. Other alterations, especially that regarding midwifery cases, were in contemplation to be proposed at the very meeting when the *operation* of *crushing* was so powerfully applied to the system by the practitioners of Walworth and neighbourhood.

After this plain statement, I confess that notwithstanding all that has yet been said or written on the subject, I cannot see why the medical men of Camberwell should allow themselves to be dictated to by those in no way connected with the Camberwell district, and suffer them to decide the question whether it is expedient to form a Medical Club or not. I trust the medical men of Camberwell will assert their independence by deciding this question for themselves.

By inserting these remarks, you will greatly oblige

A Camberwell Practitioner.

Oct. 3, 1836.

NEW FARTHING CLUB; OR METROPOLITAN INFINITESIMAL DISPENSARY.

(From the Medico-Chirurgical Review.)

A prospectus of this important institution has just reached us. It is to be under the direct patronage of a Prince of the Blood, a distinguished Earl, and many of the nobility and gentry. Its own merits, however, will insure it universal approbation and support. The superintendence of the Dispensary is placed in the hands of four of the most experienced homœpathists of this country. It is on a plan so much superior to the penny-clubs now spreading over the country, that it will soon supersede them all. The subscription is to be only *one farthing* per head per annum! We may calculate that, taking the rich with the poor, there is an expenditure, in London, of twenty shillings per

head, on medical attendance and medicines —and as the Metropolitan Dispensary will do away entirely with the heavy fees and long bill of physicians, surgeons, (excepting for operations), apothecaries, and chemists, the saving to the public of this capital will be more than a MILLION ANNUALLY!!

There can be no doubt that the whole population will subscribe at once; but, under such patronage, a charter of incorporation will certainly be obtained next session, and thus its success will be secure.

Four homœopathic laboratories are to be established, namely, at the Chelsea Water Works, on Primrose Hill—at the New River Head—at South Lambeth—and at Hampstead. From these sources infinitesimal doses of the choicest homœopathic remedies will be daily issued, not only for the cure, but for the prevention of all diseases. Thus it is calculated that, when scarlatina breaks out, a daily solution of twenty grains of belladonna in the Chelsea reservoir, will protect all individuals (within the range of that company) against the scarlet fever, besides curing those who have actually caught the disease. If cholera re-appears, a lump of camphor is to be thrown into each of the four reservoirs, the emanations from which will soon check the Asiatic pestilence *."

The great beauty of the infinitesimal system is this, that each remedy will only grapple with, or prevent, those diseases that are of its own nature — "SIMILIA SIMILIBUS CURANTUR." Thus a few grains of aconite daily dissolved in each of the reservoirs, will cure or prevent all the aconite diseases of this overgrown metropolis, without producing any effect on those in health, or modifying any other diseases or remedies.

The saving of money will be the smallest part of the benefits which must flow from this most fortunate discovery. In a few years, all diseases, excepting those resulting from casualties, will disappear, or nearly so, and the value of life will be so enhanced, that the insurance offices will be able to reduce their premiums nearly one-half! The grief, anxiety, and sorrow of families, for the loss of children, &c. will be prevented, as all people will then die the death of Nature, far beyond the obsolete boundary of three-score years and ten.

It is true, however, that there is no unmixed good in this world. Certain orders of society, now flourishing, will be reduced to beggary. The Apothecaries' Company (who are getting up a petition to parliament against homœopathy) will be ruined by the "atomic doses" of the Infinitesimal Dispensary. The College of Physicians, being ruined already, thinks it useless to remonstrate. The College of Surgeons, though they will still have the monopoly of operations, are preparing, nevertheless, to petition the legislature; because they well know that, though surgery is their *profession*, physic is the best part of their *practice*. The apothecaries may, of course, shut up shop—and all those drug-palaces, whose windows, at night, look like constellations of ethereal fire—

"flammisque imitante pyropo"—

must be converted into gin-shops or soda-water manufactories. It is to be hoped that government may, in charity, grant a free passage to Australia for, at least, twenty thousand ALLOPATHICS, who will thus be thrown out of work in this metropolis.

These are little specks of evil attendant on a public—a universal blessing. The homœopathic superintendants have humanely determined to station one of their elèves, with a few small vials and pots, some miles beyond Oxford, in order to medicate the stream of the Thames, for the benefit of the University, Maidenhead, Windsor, Kingston, Richmond, and the various towns along the river as far as Gravesend. It is calculated that a scruple of oxymuriate of mercury, and three pints of fluid extract of sarsaparilla, thrown into the Thames at Fulham, will prove a powerful alterative for all those who drink the water supplied by the Chelsea and South Lambeth Companies. A much smaller quantity will do for the New River Head. Infinitessimal Dispensaries will, without doubt, be established in all the great cities and towns of England. And, as the present race of practitioners will certainly be the last of their kind, so our great medical schools, and even our hospitals, will shortly vanish from the scene. Homœopathic doses of medicine will naturally require but "atomic doses" of the science on which medicine depends. Indeed, we see no reason why, on the homœopathic system, we should undergo the drudgery of studying anatomy, physiology, therapœia, or chemistry. A very few medicaments, divided and subdivided into inappreciable tenuity, are endued with the power of penetrating the most minute tissues of the human fabric—with the instinctive sagacity—the more than chemical affinity, of searching out, seizing, and coalescing with their "SIMILITUDES" in these remote recesses,—and there neutralizing their morbid qualities, and expelling them ultimately from the body! If this be not the millennium of medicine,

* See Dr. Uwins's pamphlet.

we can form no idea of what a milennium is! HOMŒOPATHY has, we conceive, brought us to the verge of this happy epoch; and the infinitessimal physician is entitled to the infinite gratitude of mankind!

P.S.—We have just learnt a piece of curious information. It is this: Ever since the new Poor Law Act came into operation, a celebrated homœopathist of this metropolis has been giving lectures on the infinitessimal art, to pupils who have "passed the Hall," and who are qualifying for the office of "contract doctors" throughout the provincial districts. We have now a solution of the low rates at which these UNDERTAKERS contract to attend the sick poor. The homœopathic system will enable these practitioners to beat the ALLOPATHICS clean out of the field! The training requires about six weeks, and the whole apparatus medicaminum consists of a few bottles of medicated mustard seed, labelled "homœopathic pills." Our informant shewed us a single formula, and the *mode* of preparation is the same in all. Five grains of extract of aconite are dissolved in a pint of distilled water, and the solution is poured off clear. Into this is put a pint of white mustard seed. In a few hours the seeds swell and absorb the whole of the solution. They are then spread out in the open air, when they soon shrink back to their original dimensions, being, however, impregnated with the aconite, and fit for use. The dose is from 1 to 10 of these aconite pills. The mustard seed is medicated or imbued with alll other articles of the homœopathic pharmacopœia in the same way. The cost of physicking a large parish on the "atomic plan," will, it is supposed, not exceed half a crown per annum.

CHEAP PHYSIC AT AYLESBURY.

To the Editor of the Medical Gazette.

SIR,

IN the MEDICAL GAZETTE of the 10th inst. I perceive a letter of a correspondent who signs himself "An Observer," and who affects disgust with my circular of terms; but Sufferer, I conceive, would have been a more appropriate cognomen. Permit me, Mr. Editor, to observe, had the writer been a *mere* observer, and actuated by impartial feelings, he would have preceded his sarcasm by a candid avowal of the degraded state of the profession, in this quarter long ere the "Hand Bill" appeared. In my opinion, the base motive of revenge, or self-interest, prompted the "Observer" to attack me *individually*, and allow others to pass with impunity, who had lessened the independence of the profession far more than I have. As an instance, I transcribe the following from the parish minute book:—

"We engage to attend the poor of Aylesbury in the town, and all adjacent towns and villages within ten miles, in every case of sickness and surgery—to furnish trusses, bandages, and leeches—to include all the midwifery cases—and to return any money for attendance on extra paupers, or fee due to us for attendance on coroners' inquests, for the sum of forty pounds, from April 10, 1835, to April 10, 1836, payable by equal quarterly payments.

(Signed) —— & ——, Surgeons.

The population of Aylesbury consists of 5000 inhabitants, and the pauperized state of this county is well known; the reader will therefore readily perceive that the above paltry stipend is infinitely less luerative than *my* system of charges.

I remain, sir,
Yours respectfully,
J. A. MARSHAL.

Aylesbury, Sept. 27, 1836.

REGISTRATION OF BIRTHS AND DEATHS.

To the Editor of the Medical Gazette.

SIR,

IT is a well-known fact, that, from the total want of accurate information regarding the causes of deaths in this country, the science of medical statistics is retarded in its progress. It is therefore extraordinary, that now an opportunity is offered to the medical profession to ensure the most accurate reports, by taking the registration into their own hands, they should, (as has in many instances been the case) refuse to fulfil the duties of registrars under the new act. The refusal must arise either from the apprehension that the trouble would far exceed the remuneration, or from not having considered the important aid it is now in our power to give to science. If the former be the objection, it has probably been overlooked, that no person can obtain burial without the registrar's certificate. This will ensure him immediate information of every death, without having to seek for it; and in the case of births, children unregistered within six months will not be legal inheritors of property. There can, therefore, be no doubt of the registrar having *notice* of all births, save those, perhaps, of the absolute pauper, and of them intelligence can be readily obtained from the relieving officer of the district. In the latter case, were the registration in the hands of our pro-

fession, the following facts, important to the public health, might be established.

In any given population.
- The number of deaths by diseases known to attend particular professions and trades.
- The number, and nature, of the fatal diseases of particular districts or localities, in comparison with other districts.
- The rare fatality of some, and the frequent fatality of other, maladies.

The remuneration (payable from the Board of Guardians) is 2*s.* 6*d.* each for the first twenty entries in every year, and 1*s.* each for every succeeding entry, with an additional 5*s.* for the registration of every birth of which the registrar has not had notice within forty-two days.

But it ought not to be considered in a pecuniary point of view, so much as a means of advancing medical science.

In foreign states, where the registration of births and deaths is chiefly confined to medical men, the most beneficial results are known to ensue, while, as I have before said, our statistics are notoriously deficient.—I am, sir,

Your obedient servant,

T. G.

September 28, 1836.

CASE OF ANEURISM OF THE THORACIC DUCT.

By Dr. Albers, of Bonn.

The patient, a man of fifty-one, died of abscess of the liver. On examining the body after death, Dr. Albers found, in the region of the solar plexus, amongst several hard cartilaginous tumors, an elastic soft one, with a half-transparent tegument. It was knotty, and about the shape of a fig. At first he took it for an hydatid; but it was soon discovered that it was bound by membranous bands in several places, and that a canal led into it, both above and below. It contained a quantity of fluid lymph, in which flaky matter was suspended. The internal surface of the tumor was smooth and uniform. A sound could be passed up the canal, both superiorly and inferiorly. In the latter direction its course was followed, and it soon became evident that the tumor was an aneurism of the thoracic duct. Its parietes were thicker and firmer than those where the duct had not lost its normal calibre.

Dr. Albers has only seen one similar case, viz. a dilatation of the cysterna chyli, found at the examination of a dropsical patient.

It is singular that the thoracic duct is not oftener affected by the diseases of surrounding organs. How often it is compressed in the scrofulous and consumptive, by enlarged glans, tumors, &c.! But these compressions are not attended by corresponding dilatations, as is the case with arteries and veins. Dr. A. has seen a case in which the thoracic duct, in the middle of its course, had been reduced by pressure to such a small calibre, that it would not admit even a bristle. In another case the canal was altogether obliterated; but in neither was the calibre of the canal below the narrowed part altered by the compression. (See also Rokitanski, *Austrian Annals,* vol. xvii. p. 441.) The cause of this absence of dilatation in cases of compression lies, doubtless, in the nature of the fluid, in the weakness of its current, and also in the fact that there must be more branches of the thoracic duct anastomosing with the venous system than is generally supposed. A proof of this is, that in children in whom the caliber of the duct has been materially narrowed, no emaciation has followed in consequence. Wutzur has discovered a branch of the thoracic duct leading into the vena azygos. The most frequent cases of dilatation of lymphatic vessels are those in which they contain tubercular, scrofulous, and cancerous matters. Numerous descriptions of such cases are found in the works of Cruveilhier and Carswell.—*Hannoversche Annalen*, and *British and Foreign Medical Review.*

NEW METHOD OF PRESERVING DEAD BODIES.

By Dr. Tranchina, of Palermo.

The results of this method were first published in the Sicilian journal *La Cerere*, in May, 1834; but the actual process was first made known and openly practised by the author, on the 11th May, 1835, in the military hospital, *Della Trinità*, at Naples. The operation consists in the injection of the body, through the carotid artery, with a solution or mixture of two pounds of arsenic in twenty or twenty-four pounds of water, or spirit of wine, coloured with a little red lead or cinnabar; and in the introducing, by means of a trocar, into the abdominal cavity, the same solution, in cases where putrefaction had made some progress. In some cases it appears also that the solution is injected into the anus, nostrils, &c. By this process the body is kept fresh, flexible, without smell, and of its natural colour, during more than two months; after which it gradually dries, hardens, becomes of a darker colour, and can be preserved for years. For this discovery, the great importance of which is self-evident, and for its public disclosure, Dr. Tranchina has been presented, by the

King of Naples, with the sum of 3000 ducats, has been raised to the dignity of knight of the order of Francis I., and appointed military surgeon of the second class.—*British and Foreign Medical Review*, Oct. 1836.

CHARING-CROSS HOSPITAL.

A MEETING was held in Great Windmill Street, on Monday, for the ostensible purpose of expressing the opinion of the medical public with regard to the recent transactions at the Charing-Cross Hospital. The chair was taken by Dr. Birkbeck, but he was not supported by any such numbers, or by such members of the profession, as to give weight to the proceedings. Resolutions were passed condemnatory of the plan on which the hospital is conducted, and much disapprobation expressed of Mr. Howship's conduct in giving Mr. Pettigrew 500*l.*; but we are not aware of any censure having been passed on the latter for accepting it.

We quite agree with the resolution declaring the office of "Director" an absurdity, but the time and manner in which public attention has been directed to the subject give it all the air of private pique. We cannot compliment any of the parties on the figure they make, and would advise them not to intrude themselves upon the public unless they have something to adduce much more to the point than any thing which has yet appeared.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

September 29, 1836.

William Ralph Peck, Kimbolton.
Edward George Baron, Hull.
John Dickinson, Plunder Bridge.
Henry Richard Smith, Newark.
Robert Norton, Nailsworth, Gloucestershire.
Robert Baget, Shrewsbury.
Joseph Glover, York.
Frederick Hanham, Bath.
William James Clark, Skipton Bridge, Yorkshire.
Richard Ley, Newton Abbott.
Richard Thomas Morris, near Wigan, Lancashire.
William Foster, Royal Navy, Yarm.
Robert Fothergill, Bedale, Yorkshire.
Charles Bruorton, Salisbury, Wilts.
George Eveleigh.
Mathew Moorhouse, Holmfirth, Yorkshire.
William Marsden, Thornhill,
Frederick Heald, Wakefield.
James Naylor, Preston, Lancashire,
Joseph Parkin, Workington, Cumberland.
Charles Frederick Jenkins, Thames Ditton.
Allen Joseph Taylor, Morpeth, Northumberland,
Thomas Wright, Wolverhampton.
Henry Poole Palmer, Winterbourne, Bristol.
Alexander Wright, Birmingham.
James Cowherd, Kendal.
Thomas Truran, Exeter.
William Field, Tong.
Francis Harold Duncombe Lewis, London.
Thomas Mackenzie Smith, Bideford, Devon.
James Barton Nottage, Lancaster.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Oct.* 4, 1836.

Age and Debility	34	Inflammation	15
Apoplexy	5	Bowels & Stomach	5
Asthma	5	Brain	4
Cancer	2	Lungs and Pleura	7
Childbirth	1	Insanity	1
Consumption	55	Liver, diseased	1
Convulsions	30	Measles	7
Croup	1	Mortification	4
Dentition or Teething	8	Paralysis	5
Dropsy	12	Rheumatism	1
Dropsy on the Brain	8	Scrofula	2
Dropsy on the Chest	1	Small-pox	10
Epilepsy	1	Sore Throat and Quinsey	1
Erysipelas	2	Thrush	1
Fever	9	Tumor	2
Fever, Scarlet	2	Worms	1
Fever, Typhus	4	Unknown Causes	3
Gout	1		
Hæmorrhage	2	Casualties	8
Heart, diseased	1		
Hooping Cough	1		

Increase of Burials, as compared with the preceding week . . 93

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Sept. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 22	from 30	to 55	30·15	to 30 10
Friday . . 23	50	63	29 92	29 92
Saturday . 24	51	67	30 02	30·01
Sunday . . 25	50	68	30·04	30·10
Monday . . 26	56	67	30·06	29·92
Tuesday . . 27	55	65	29·76	29·75
Wednesday 28	49	58	29·65	29·53

Prevailing winds, W. by S., and S.W.

Except the 24th, 25th, and afternoon of the 26th, generally cloudy; rain on the 23d and 28th. A little thunder in the morning of the 28th.

Rain fallen, ·275 of an inch.

The sudden and great change in the temperature from the 22d to the 23d, is worthy of particular remark.

Thursday . 29	from 49	to 60	29 28	to 29·26
Friday . . . 30	42	52	29·32	29 50
Oct.				
Saturday . 1	36	53	29·38	30·04
Sunday . . 2	39	52	29·15	29·28
Monday . . 3	41	50	29·86	29.35
Tuesday . 4	30	53	29·41	29·51
Wednesday 5	32	55	29·72	29·88

Prevailiing Winds, W. by S. and N.W.

Except the 2d, 4th, and 5th, generally cloudy, with frequent rain.

Rain fallen, 1 inch, and ·825 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

INTRODUCTORY LECTURES.—We really cannot make room for "Introductory Lectures." Such addresses we presume to have been heard by the only parties to whom they can be useful;—we mean the pupils at the several schools: for others they do not possess sufficient interest to warrant us in giving them insertion.

MR. WALKER'S reply has been received.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 15, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture III.

On Age, medico-legally considered—Mode of ascertaining the Age from Physical Appearances—Age of the Fœtus—Growth of the Embryo—Periods of Human Life—Infancy.

The first subject of a special nature to which I shall call your attention, is Age.

The consideration of age is an element in almost every investigation undertaken by the medical jurist. Whether his inquiries be relative to the living or the dead—whether his object be to ascertain the identity of an individual, or to appreciate the extent and nature of personal injuries—or whether his researches bear on questions of violation, pregnancy, parturition, sterility—in all these, and a number of other instances, which I need not stay to enumerate, as you will be better prepared to estimate their importance hereafter, age requires to be duly considered.

Legal distinctions respecting Age. — Our laws are precise regarding certain epochs of life: there are certain ages to which particular rights and responsibilities belong. A male at *twelve* years old may take the oath of allegiance; at *fourteen* he is at years of discretion; may consent or disagree to marriage, may choose his guardian, and make a valid will of his personal property: at *seventeen* he may be an executor, and at *twenty-one* is at his own disposal, with a perfect power to do as he pleases with his estate, both personal and real. A female at *seven* may be betrothed or given in marriage; at *nine* she is entitled to dower; at *twelve* is at years of maturity, and therefore may consent or disagree to marriage; if proved to have sufficient discretion, she may at this age also bequeath her personal estate: at *fourteen* she is at years of legal discretion, and may choose her guardian; at *seventeen* may be an executrix; and at *twenty-one* may dispose of herself and lands. Again, with respect to criminal liabilities and immunities, a person under *twenty-one* (being in the eye of the law an Infant) is privileged as to common misdemeanors, so as to escape fine, imprisonment, and the like: in the case, however, of any notorious breach of the peace, such as riot or battery, he is liable to suffer the prescribed penalties, if he be above fourteen. A felonious crime still further abridges the privilege of age: for infants of *ten* have been hanged for murder — the evidence of malice having been clearly made out: and it is only under the age of *seven* that a person cannot be guilty of felony; for then it is considered that a felonious discretion is almost an impossibility in nature.

In all such cases, where there is no documentary evidence of age to produce—a circumstance far from uncommon in a country like this, so negligent hitherto in respect to registries of birth, and even of baptism—there is obviously no other resource than to ascertain the fact by reference to physical peculiarities. And here the assistance of the medical jurist is required.

Other occasions of inquiry as to Age.— Among the qualifications and disqualifications for *military and naval service*, age forms a special object of inquiry. It is a highly important element in the selection of recruits; and we even find *twenty* fixed as a minimum, in a late order from the Horse Guards, relative to recruiting for service in tropical climates. Mr. Marshall justly observes on the subject, that "as the exact age of men in this country cannot commonly be easily or satisfactorily ascertained, the surgeon who inspects a recruit should be

authorized to estimate the age by physical appearances."

In effecting *policies of Life assurance*, I need scarcely remind you that much depends on the age of the insuring party, the premium being almost wholly regulated with reference to that point; and it may be your duty, as medical officers either of the company or the applicant, to take care that there be no error or fraud committed in this respect.

Thus it is evident how very properly the discussion of age should take precedence of other questions forming the subject of a course of Forensic medicine; and it shall be my aim, in the present lecture, to point out to you the mode in which the physical proofs and evidence of age may be ascertained.

Definition.—Age, as the term is commonly used in legal medicine, implies the time of life—the period of human existence which one has attained, or in which an individual lives.

Object.—The determination of age is sometimes attended with difficulty. In certain cases it can be pretty exactly effected, as in the infantile or fœtal periods; but, in general, we can do no more than come to certain average results: we cannot pretend, for instance, to fix the age of an individual, except in very peculiar circumstances, to the day, week, or perhaps month, which he has reached; but what we design to do, and, in general, can do, is to determine the period up to which he has lived—each period or portion of life being distinguished from other portions by a particular set of developments which produce marked changes in the person.

An acquaintance with the laws of growth necessary.—For a task of this kind, we must be prepared by being acquainted with the laws of growth. Now, these laws can only be fully appreciated by taking a view of them as they may be oberved in operation, from the very earliest point at which they can be traced. In order to have a complete survey of the changes occurring in the course of time in the human being, we must therefore begin with the fœtus, and even the embryo, and carry our observation through all the subsequent stages of existence to maturity and decline.

AGE OF THE FŒTUS.

I must premise that it will be necessary to be much more full and minute in treating of the first periods of life than those which will subsequently engage our attention. The reason is this—that so many purely medico-legal questions relating to pregnancy, prolicide, &c., are chiefly dependent on the appearances indicative of age, which are observed in the expelled ovum or fœtus. We shall, therefore, commence with intra-uterine life: and in doing so, will freely avail ourselves of the most authentic sources of information which have of late been opened to us.

Earliest appearance of the ovum and embryo.—According to some of our ablest English obstetricians, nothing like an ovum, containing a definable embryo, can be detected in the uterus before the 20th or 22d day after conception. Haller says that the embryo is not perceivable till after the 15th or 20th day. Of this period it is generally admitted that several days are consumed before the ovum reaches the uterus. In rabbits, three days elapse, and in the bitch, from six to eight, while the ovum is being carried along the fallopian tube to be deposited in the uterus. Is it likely that it should be less in the case of the human female, where there are so many disturbing causes, physical and moral, to interfere? And if this be so, what are we to think of the story published by the late Sir Everard Home, in the Philosophical Transactions for 1817?

Sir Everard Home's eight-day case.—A female servant, aged 21, left her master's house in the forenoon of the 7th January, 1817, and returned in the evening, complaining of illness. It was her regular time for being unwell, but no catamenial discharge took place. She continued melancholy and ill, and on the 13th had a fit of epilepsy, followed by delirium. She died on the evening of the 15th. On examining the body after death, the uterus, according to Sir Everard, appeared to be impregnated. The organ was removed and put in spirit. In its interior, towards the os tincæ, was observed, after a close search, a small body—a corpuscle—so small, that Mr. Bauer, the microscopist, compared it to the egg of an insect: it required an excellent instrument to find out what it was—and behold it was an embryo! But the whole narrative is questionable. There is no sufficient evidence that the woman was pregnant, and even if she had conceived, it is scarcely probable that the ovum could have reached the womb. Besides, the human ovum is spherical—not like a minute grain of barley, as represented in the plate attached to Sir Everard's paper: nor would it have required the aid of a microscope to examine it even at the earliest. The additional absurdity of supposing it an embryo, destitute of its envelopes, crowns the whole. In short, though this case has been implicitly received by several authors, it has, on the other hand, been generally scouted by competent judges. The state of the female, who was, probably owing to some accidental cause, labouring at the time under suppression of the menses, is sufficient to account for the appearances noticed in the interior of the womb: and

there is every reason to believe with Velpeau, that what Sir Everard Home took to be an embryo, was nothing else than a particle of mucus!

M. Velpeau's case of twelve days.—Velpeau, one of our ablest authorities on the subject of embryology, tells us that he has had on three occasions an opportunity of examining the ovum when it could not have exceeded *twelve days* from conception. Its bulk was then about that of a moderate sized pea. In two of these instances he could not satisfy himself that he really detected an embryo in the interior. But the third case he considers as probably the most remarkable ever met with. Here are figures of the ovum entire, and laid open; they are drawn of the natural size—fig. 2 being a little spread out.

FIG. 1, and FIG. 2.—*An Ovum and Embryo of twelve days.*

The history of this ovum is curious, and is thus related by M. Velpeau. A midwife who attended his lectures—as many intelligent females in the French metropolis do, in order to prepare themselves for subsequent practice,—happened to be at her menstrual period, and just as it ceased, her husband returned from a journey which had detained him from home for six weeks. No matrimonial intercourse occurred till the following day: and exactly on the thirteenth day after, she aborted of the ovum in question—so that it *could not* have been more than 12 days old. She sent it immediately to M. Velpeau, who values it, very properly I think, as one of the most precious that has ever fallen into the hands of an embryologist.

In the details which I am now about to give you, it is not my intention to present anything like a complete account of the structure of the embryo: my principal object is to call your attention to the size and proportions of the ovum and its contents, at different periods of intra-uterine life: so that should you be called upon as medical jurists to state your opinion of the age of an expelled ovum or fœtus, you may be able, with some confidence, to do so.

At the twelfth day, then, the ovum, which is about the size of a pea, is perceived to be covered with a villous shaggy outer coat, the chorion: the flocculent part, which becomes more circumscribed subsequently, being that which forms an attachment to the decidua, and constitutes the placenta. The embryo at this period, as represented in the above figure, is semi-lunar in shape, and rounded pretty equally at both ends. The globular appearance in the second compartment of the opened ovum (and *d* in fig. 3) is remarkable: it is the umbilical vesicle—an organ peculiar to the embryo in the first few months of its development.

Three weeks to a month.—About the 21st day the ovum appears to be as large as a hazel-nut. When laid open, as in the annexed figure, (fig. 3,) it looks, of course, much larger.

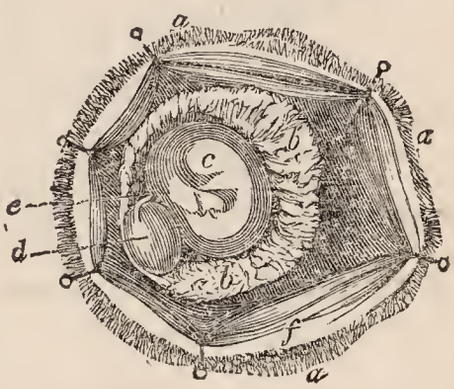

FIG. 3.—*Ovum and Embryo at 21 days—the Embryo seen through the Amnios.*

The embryo now measures two or three lines in breadth, and probably its length, were it straightened out, would be from three to five, or about half an inch.

The different parts of the face become distinguishable at different periods. The aperture of the mouth is seen very early—say from the 12th to the 20th day. The nose, or at least the nostrils, at about 30 days: the prominence, not till five or six weeks, perhaps. The eyes are observable by the fourth week, if not earlier. The rudiment of the ear may be perceived as early as the 30th day: but that part undergoes no remarkable development for six or seven weeks. Towards the expiration of the first month, the ovum has attained the size of a large nutmeg.

From four to six weeks.—The ovum about the sixth week is nearly as large as a hen's egg; and the embryo is about an inch in length. The extremities sprout forth from the trunk like vegetations, all about the same time. At from thirty to forty days the fore-arm and the leg may be distinguished, and the points of the fingers and toes are to be perceived. The foot is even now distinct from the hand, evidently displaying what is to be its future function—to form the pedestal of the figure. It is remarkable, that about the expiration of the sixth week a point of ossification may be detected in each half of the lower jaw; as also in each clavicle.

Two months.—The embryo, or, as it now begins to be more properly called, the fœtus, measures above an inch and a half in length; it weighs about half an ounce.

Rudiments of the lungs are visible in the interior, and there are points of ossification in the frontal bone and some of the ribs. The placenta has assumed a distinct form, and the umbilical vessels become tortuous. The sex is scarcely yet distinguishable.

FIG. 4.—*Fœtus of about ten weeks, somewhat magnified by the spirit in which it is preserved.*

Three months.—The fœtus is now nearly three inches long, and weighs about an ounce and a half. The fingers are very distinct. The eye-lids are formed, and the membrana pupillaris is perceptible. The ventricles of the heart are separated; the sexual parts prominent; the umbilical vesicle has disappeared.

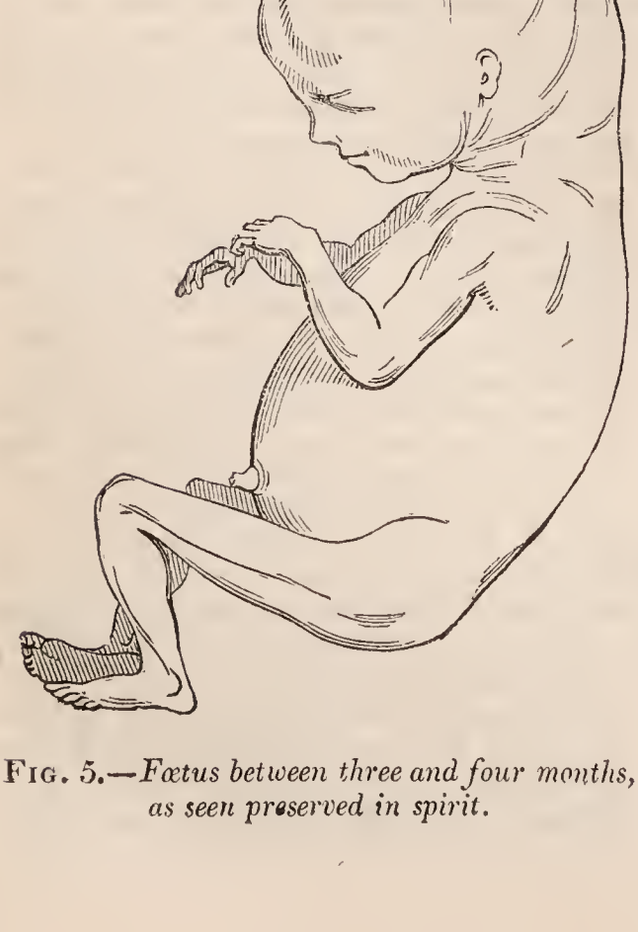

FIG. 5.—*Fœtus between three and four months, as seen preserved in spirit.*

Four months.—Above six inches long, and three ounces in weight. The nails begin to be observable; there is meconium in the duodenum; some points in the sacrum ossified; the mouth large and open; the skin of a pinkish hue.

Five months.—The fœtus has now attained the length of about seven inches, and it weighs about seven ounces. The head and heart both comparatively very voluminous; the kidneys large; the gall-bladder distinct; rudiments of the teeth may be detected, and there is a point of ossification in the calcis.

Six months.—Above ten inches in length, and the average weight a pound. The membrana pupillaris is still observable; feet of a purplish red colour; a sebaceous secretion begins to be formed on the skin; a few silvery hairs are observed on the head; a serous but not bitter fluid in the gall-bladder; the testes close by the kidneys; meconium in the small intestine; ossification in different parts of the sternum.

Chaussier's rule of admeasurement. — It is worth observing, that about this time the middle point of the whole length is usually found at the lower extremity of the sternum, whence it gradually descends in the succeeding months, till, at the mature period, it reaches the umbilicus. For this character in the fœtal growth we are indebted to M. Chaussier, who founds upon it the practical rule,—to take the length of the fœtus, and then observe to what point half that length reaches: if it extend to the lower end of the sternum, it has attained its sixth month; if the navel, the ninth; and so for the intermediate spaces. But it is right to add, that competent authorities have questioned the correctness of this rule: among others Mende, in his *Ausführliches Handbuch* (which, by the way, contains the most elaborate account I have seen of the growth of the fœtus), asserts, that however plausible it may appear, it is not to be always relied on. "The middle point," says he, "by no means corresponds to the same part of the body in fœtuses of the same age: a fact for which we might be prepared by considering that the several sizes of the fœtus depend, now on its large head and neck, now on the trunk, and again on the magnitude of the limbs. This I have verified by numerous measurements, taken with great care and pains; and the conclusion I have arrived at is, that the directions laid down by Chaussier are uncertain for practical purposes, and more particularly for those of the medical jurist."

Seven months. — Length above twelve inches; weight from three to four pounds. The skin firm, of a pink colour, and covered largely with the sebaceous coat. The membrana pupillaris generally disap-

pears in the course of the seventh month; the eye-lids are no longer glued together; the nails do not reach the ends of the fingers. In the astragalus there is observed a point of ossification; the meconium diffused through the whole length of the intestine; the left lobe of the liver almost as large as the right. The lungs of a reddish brown colour, and of a compact liver-like structure, occupying the sides and back part of the chest; the testes have descended a little from the kidneys; the brain comparatively firm, but without any observable deposition of white substance.

Eight months.—The fœtus now measures from fourteen to sixteen inches in length, and weighs commonly about four or five pounds. The nails have reached the tips of the fingers; the quantity of sebaceous matter deposited on the skin is considerable; a point of ossification may be noticed in the last vertebra of the sacrum. The brain presents an appearance of convolutions; but still there is no white substance. The testes have reached the inguinal rings.

At nine months, or mature.—The length of the mature fœtus averages above eighteen inches, and the ordinary weight is between six and seven pounds. Half the length reaches to the umbilicus, or very nearly. There is more or less hair on the head,—sometimes an inch long. An abundant deposition of sebaceous matter is observed on the skin, and appears to be proportionate to the development of the lymphatic system in the fœtus. The lower limbs are longer than the upper; though, measured from the arm-pits to the tips of the fingers, and from the groin to the toes, the reverse would seem to hold. The feet are a sixth of the whole length of the body. The cartilage of the ear is completely formed; there is a point of ossification at the inferior extremity of the femur; the os hyoides not ossified; some appearance of white substance observable in the brain. The liver reaches the umbilicus; the testes have usually passed the rings, and descended into the scrotum; meconium is found in the rectum. The following are the principal measurements of the head, according to Devergie and Velpeau:—

	French In.	Lin.	Engl. In.
Occipito-frontal diameter	4	3	4·52
Occipito-mental	5	0	5·32
Fronto-mental	3	6	3·71
Bi-parietal, or transverse	3	4	3·54
Bi-temporal	3	0	3·19
Greater circumference, or occipito-mental	14	0	14·91
Transverse	10	6	11·18

Let us now sum up the various points to be attended to in collecting the proofs of fœtal age. Nor can we do better than follow the order recommended by M. Devergie. *First*, examine the annexes of the fœtus, or, in other words, the ovum itself, independent of the fœtus: observe the placenta as to its shape and consistence; the state of the membranes; the umbilical vesicle, if it be present; the funis, as to its length and degree of torsion. *Secondly*, examine the fœtus and its organs; weigh it; take its length; observe to what point half the length reaches, and note the insertion of the umbilicus. Let the skin be inspected as to its colour, consistence, and sebaceous coat; observe the nails, the eyes and eye-lids, and the presence or absence of the membrana pupillaris; the nose, mouth, and ears; the abdomen, and the state of the digestive tube; the liver and gall-bladder; the kidneys and renal capsules; the testes or uterus; the heart, with reference to the development of its cavities; the arteries connected with it; the ductus arteriosus; the lungs; the larynx and bronchia. The muscular system; the state of the bones, as to the progress of ossification; and, lastly, the extremities, with a view to the comparative development of their several parts.

Such are the leading characteristics by means of which we are to form an opinion of the age of an embryo or fœtus. Where the object is to ascertain the age of a *living* fœtus—of course, in *utero matris*, the inquiry becomes equivalent to that for ascertaining the period of pregnancy; but this we reserve for a future lecture. Nor let it be supposed that such researches are merely curious; they are, in reality, important and necessary; for both in a civil and criminal point of view the life of a child, even before birth, is an object of protection with our laws: it is avenged if injury be offered to it; an infant yet unborn is capable of inheriting an estate, and of becoming a legatee, from the moment it is ascertained to be alive.

PERIODS OF HUMAN LIFE.

The periods into which the life of man has been portioned out are in great measure arbitrary. The gradations by which they pass into each other are imperceptible, though the consequent changes are manifest enough. And it has long been popular, as well as convenient, to make a distinction in those periods, or *ages*, as they have been called.

Threefold division.—Some of the oldest authorities, — and Aristotle among the number, — thought fit simply to distinguish the stages of our mortal career into those of growth, perennity, and

decline, not perceiving, or not caring to notice, that, strictly speaking, no such period as that to which they attached the quality of durability existed,—there being, in fact, no moment during the existence of our corporeal system in which we can be said to be stationary. Letting this pass, however, the threefold division appears to have been early supplanted by another, which seemed more practical.

The Seven ages.—As early as the time of Hippocrates, we find man's life portioned into seven ages. Both Hippocrates and Proclus subdivide the period of growth just mentioned into infancy, boyhood, and puberty — that of perennity into youth and manhood — and that of decline into senescence and decrepitude. Thus we have the authority of distant ages, and of the father of physic, for that division of human life which is popularly recognized amongst us, and which must popularly prevail as long as the writings of our great dramatist are extant—that is to say, as long as our language is understood. You are all no doubt familiar with the beautiful description which Shakspeare has given of the Seven Ages, in the second act of "As you Like It."

It should be mentioned, that attempts have from time to time been made by modern writers to introduce other more brief and comprehensive divisions than those they already found in use: Eschenbach and Haller, and Bernt, for example, adopt a *three*fold partition; Hebenstreit, Ludwig, and Henke, recognize *four* periods; Ploucquet *five*; Orfila also *five*; Teichmeyer, Wildberg, Meckel, and Mende, *six*; Grüner *seven*; and Metzger *eight*. But those who adopt less than six are obliged to subdivide the early periods, thus virtually employing a larger number. I shall only add, that Zacchia, Tortosa, Foderé, and Plenk, are among those who are decidedly for *seven* ages.

Suppose, then, we adopt this popular, and let me also call it physiological arrangement, what are the limits by which each period is to be defined? Here too we shall find a *sevenfold* order the most satisfactory, easy to be remembered, and suited in every respect to medico-legal purposes. The first age commences at birth, and runs on to the 7th year; the second, or boyhood, from that to the 14th; the third, or puberty, from the 14th to the 21st; youth, or juvenility, to about 35; manhood, from that to about 56; senescence, or old age, to 84: after which decrepitude closes the scene. Now it is curious, and worth observing, that all these numbers are multiples of seven. The enumeration may be more striking when arranged thus:—

Infancy.....	0 to 7	=	1×7
Boyhood	7 to 14	=	2×7
Puberty	14 to 21	=	3×7
Youth	21 to 35	=	5×7
Manhood	35 to 56	=	8×7
Senescence	56 to 84	=	12×7
Decrepitude.....	84 to 0		

Climacterical years. — In noticing this coincidence — this curious harmony of numbers—I may take occasion to remark one or two other multiples denoting epochs, to which great importance has been from the earliest times attached. Both 7 and 9 have long been held as mystic numbers: and peculiar influences have been attributed to those years marked by their special multiples. The three most critical epochs in the life of man were supposed to be the seventh return of the seventh anniversary, the ninth of the ninth, but above all, the ninth recurrence of the seventh. The first of these, the 49th year, was called the lesser climacteric—the second, the 81st, the grand climacteric—the third, however, or the 63d year, obtained, *par excellence*, the denomination of *the* climacteric year. Ανδροκλας, another epithet bestowed upon the latter, originated in the supposed efficacy of this mystical number in *breaking down* the constitution of man. Sir Thomas Browne, in his Enquiries into Vulgar and Common Errors, notices this superstition, and attributes it to the understanding which "ascribeth unto many things far larger horizons than their due circumscriptions require, and receiveth them with amplifications which their reality will not admit;" upon which he proceeds to pour out a profusion of learning in disproof of the common opinion. Richerand also notices the subject in his *Erreurs populaires*. But the impression has been somewhat revived of late, under the patronage of our learned president of the College of Physicians. Sir Henry Halford, in an ingenious paper, has shown that there exists a disorder to which men are subject about the time of their reaching their 63d year. It is attended, he tells us, with well-marked symptoms, and a peculiar breaking up of the constitution, which is frequently fatal, from not being well understood by practitioners: he calls it the climacteric disease: you will see his account of it in his collection of Essays and Orations.

I shall now request your attention to some remarks on the subject of each period of life separately, in the order just now selected.

Infancy.

With regard to the period of infancy, the chief question with which the medical jurist has to deal is—how is he to ascer-

tain the age of an infant within the first months, weeks, nay, days, of its extra-uterine existence? The circumstances under which we may be required to find an answer to this question are of frequent occurrence. I have already alluded to its connexion with cases of infanticide, and shall have again occasion to recur to that fact when treating of child-murder more at large. But suppose, for the present, a child found *alive*, exposed, and suspicion resting on some female who is reported to have given it birth and then abandoned it. If the exact age of the infant can be ascertained, and there be no corresponding signs of recent delivery about the woman, the fact is strongly in favour of her innocence, in spite of all moral or circumstantial evidence to the contrary: if, on the other hand, the signs correspond, there will be a presumption of guilt.

It will be convenient to subdivide the period of infancy into two well-marked stages—first, that from birth to the first eruption of the teeth; and second, the period of dentition, during which the temporary teeth are produced, and comprehending the interval which occurs before the permanent teeth are completed.

(*a*). *First infancy.*—What are the signs of a new-born infant's age? Our first proceeding with a view to satisfy this inquiry should be to *examine the umbilicus:* to see whether the cord or any remnant of it be present, and what may be its condition.

The umbilical cord, it is known, does not come away, in the generality of instances, till the fourth or fifth day after birth. An obvious inference, therefore, from its *presence*, would be, that the infant cannot have lived five days. We then proceed to examine the *state* of the cord, in order that we may be able to approximate still further to the date of birth: now this we are enabled to do by attending to the valuable observations and rules laid down by M. Billard, and which are thus practically summed up by Orfila and Devergie:—In the infant just born the cord is fresh and firm, bluish, and rounded off; there is blood also in its vessels. The first perceptible change that occurs after it has been divided and tied, is its shrinking (*fletrissure*): this proceeds from its extremity, where the ligature is, to its base at the umbilicus, and is observable in general before the lapse of a few hours. When this process is complete, which it generally is by the close of the second day, the cord is quite soft and flaccid, and a well-marked congestion is perceived around the umbilical ring. The next phenomenon to be noticed is the drying up of the cord. It becomes brown and semitransparent, losing the gelatine which it contains. As its membranes collapse it becomes flattened, and its integument assumes the colour of parchment. This withering (*desiccation*) commences on the first or second day, and is generally completed by the third. It has been attempted to establish a distinction as to this process, according as it may have occurred during life or after death; there being, according to some observers, appearances of inflammation about the umbilical ring in the former case, and not in the latter; but such appearances are not sufficiently constant to warrant any positive conclusion from the fact of their presence or absence. The next phenomenon to be noticed is the *fall of the cord*, which takes place on the fourth or fifth day. Its base dwindles by degrees; the umbilical arteries give way; but the vein lasts somewhat longer. When this occurrence is attended with inflammatory action about the umbilicus, the traces of such inflammation continue till the tenth or twelfth day after birth, the epoch at which cicatrisation is effected. As to this latter phenomenon (*cicatrisation*), though it commonly occurs at the epoch just mentioned, yet, when the cord is thin, it sometimes takes place earlier—that is to say, in less than *ten* days. A temporary umbilical cicatrix is first formed, which, in the course of about forty days, gives place to the permanent one.

The next sign indicative of the new-born infant, is the *desquamation of the cuticle;* an appearance which is very different from the peeling off of the epidermis from putrefaction. The desquamation alluded to has not been observed to take place sooner than twenty-four hours after birth; and it is at its height by the third or fourth day. The process usually commences on the abdomen, and then extends successively to the chest, arm pits, and groins, the back, the extremities, the feet, and the hands. In some children the epidermis comes off in the shape of powder—not in scales. If, then, on examining an infant, the *desquamation* be observed, it may be presumed to have been born a day at least.

When we have an opportunity of inspecting the body after death, there are other proofs of early age to be gathered. The *ductus arteriosus* will be perceived, at least contracted, in a child that has survived birth, even though it were but for a very short time. The *foramen ovale*, also, will probably be found to have undergone a change in size and figure; and the *ductus venosus* will perhaps be observed to have sustained an alteration in form. But all these appearances we shall have a better opportunity of noticing when we come

to treat the subject of infanticide, some of the proofs of which depend on the occurrence of those changes in the circulatory apparatus.

Among the signs of age of the new born, we ought not to omit those derivable from the state of the alimentary canal: but they will require only a brief notice. If the stomach be empty, or contain only a little mucus, while the large intestine is still charged with meconium, and the bladder filled with urine, death has probably occurred immediately after birth, —if it be not, indeed, a question whether the infant were not still-born. If, on the other hand, the stomach contain milk, or other alimentary matter, and both bladder and intestine be empty, the child undoubtedly lived for a time. The meconium, it must be recollected, is lodged in the large intestine for some time previous to birth. It is expelled presently after birth. Now the tube has been protected during the detention of the meconium, by a layer of mucus of considerable thickness and consistency. The layer is not removed immediately on the expulsion of the meconium; in some cases it is no longer observable after the first day; but in general we need not expect to find it wholly gone till four days after birth: and when we see it, we may observe that it has contracted a greenish hue. From these facts, M. Billard derives a practical rule:—"If the colon be found of a deep and uniform greenish hue, the meconium has been only recently expelled; the infant must be then one day, and may be at most three days, old. But should the colon have an irregular spotted appearance, the meconium has been still less recently expelled, and the infant is probably three or four days old." It is right to add, however, that these indications are by no means as valuable as those to be procured from the state of the funis.

There are other well-known signs of early infancy, which need not detain us in pointing them out. I allude to the extreme softness of the bones of the head, the open state of the fontanelles, the downy face of the infant, its feebleness, and inferior size. At a period a little more advanced, we may avail ourselves of several moral circumstances in forming our estimate of the age; such as the smiles of the infant, the early dawnings of the development of the mind, and the distinctness with which certain desires and wants are expressed. But we must be cautious, as medical jurists, how we derive more than collateral evidence from such phenomena.

(*b.*) *Period of first dentition.*—At length the teething period arrives about the sixth or seventh month, and is generally ushered in with a copious flowing of saliva from the mouth. The infant, too, manifests a certain restlessness, and is ever anxious to rub the gums.

The order in which the teeth are cut is worth attending to, although the exact date of the successive appearance of each tooth cannot be precisely stated. First the middle incisors of the lower jaw are observed; then those of the upper to correspond; then the remaining incisors in like manner — first below, then above. Next appear the first molars of the lower jaw, then the opposite ones of the upper. The canine teeth follow; after which the second molars, until the whole *twenty* milk-teeth, constituting the temporary set, have been produced. The process is generally completed towards the end of the second year*.

The following may be considered as an approximation to the average epochs of the appearance of the milk-teeth:—

The two middle incisors, from	5	to 7	months.
The two lateral incisors,	6	to 9	—
Two first molars	8	to 15	—
Two canine teeth	15	to 18	—
Two second molars	18	to 24	—

But there is usually a great diversity in different children, with respect to the time of cutting their teeth. Some are born with their incisors above the gums; others have no teeth at all till the end of the second year; and persons have been known who lived many years without having ever had a tooth.

Growth of the bones.—I have already noticed some of the earliest epochs at which the osseous system begins to be developed, and shall now put together what further points remain to be considered in connexion with infancy. I am anxious to bespeak your attention to this subject, though it may seem somewhat burthensome to the memory, because it is from the progress of the bony structures (thanks to the researches of Beclard) that we may derive some of our best and surest indications of age at every period, but particularly in those of early life.

About the 5th month of infancy, a trace of osseous deposit may be observed in the cuboid bone of the tarsus. The branches of the os hyoides are now ossified, and somewhat later the lower apophysis assumes the same state. At six months, an osseous point is found in the anterior arch of the atlas, and the great wings of the sphenoid become united with the body of that bone. At twelve months, or thereabouts, the middle of the coracoid process of the scapula is generally found to be ossified: osseous points are also found in the heads

* See MEDICAL GAZETTE, vol. xiii. pp. 160 and 237.

of the long bones, the tibia and femur in particular; and the vertebræ have some considerable changes operated on them. There is a point, for example, in the first coccygean vertebra; and the two osseous points in the posterior arch of each vertebra become united. The pieces of the temporal bone are firmly joined.

At the age of *two years*, the epiphyses of the metacarpal and metatarsal bones are ossified: and an osseous germ is found at the lower extremity of the radius. At 2½ years, the patella becomes ossified, and so does the lesser tuberosity of the head of the humerus.

At *three years*, the first molars of the second dentition make their appearance, and about six months later the second molars of the same set.

At *four*, the great trochanter and pyramidal bone of the carpus, also the second and third cuneiform bones, become ossified. Between four and five years, the upper extremity of the fibula, the epiphyses of the phalanges, the trapezoid, and the semilunar bodies, exhibit a bony structure.

At *six years*, the pisiform bone is formed, and the constituent pieces of the ossa ilia are separated merely by a very thin cartilaginous layer: the descending branch of the os pubis, and the ascending one of the ischium meet. Numerous changes also in the progress of the bony formation now occur in the vertebral column: but I find my limits will not allow of their enumeration.

We shall complete our view of the remaining ages in next lecture.

MEDICAL PROBLEMS.

By William Griffin, M.D. Limerick*.

HOW ARE NEURALGIC AFFECTIONS TO BE DISTINGUISHED FROM INFLAMMATORY?

In treating of peritoneal and enteric inflammations, Dr. Abercrombie states, as conclusions from facts, "that extensive and highly dangerous inflammation may exist in the intestinal canal, without obstruction of the bowels, and it may go on to a fatal termination, while these are in a natural state, or easily regulated by mild medicines, through the whole course of the disease."

"That extensive and fatal inflammation may be going on with every variety in the pulse; it may be frequent and small, it may be frequent and full, or it may be little above the natural standard through the whole course of the disease."

"That extensive inflammation may go on without vomiting and without constant pain; the pain often occurring in paroxysms, and leaving long intervals of comparative ease."

"Keeping in view these sources of uncertainty (he says), our chief reliance for the diagnosis of this important class of diseases, must be on the tenderness of the abdomen. This symptom should always be watched with the most anxious care, *whatever may be the state of the bowels or of the pulse, or the actual complaint of pain*, and though the tenderness itself should be limited to a defined space of no great extent."

Whatever the experience of the profession may have determined with respect to the greater part of these conclusions before the appearance of Dr. Abercrombie's work, I believe it has been always in accordance with the opinions of that distinguished physician on the importance which should be attached to the presence or absence of abdominal tenderness in cases of suspected inflammation; but Dr. Abercrombie was very well aware, when he gave such just weight to this symptom as a means of diagnosis, that in itself it was far from conclusive, and derived its value chiefly from the existence of many other corroborating signs. He states, indeed, distinctly, in another part of his work, "that pain increased upon pressure does not appear to be a certain mark of inflammation in the bowels, for it occurred in Case XXIV. (related by him), in which there was no inflammation; and in several other cases it was met with before, probably, inflammation had commenced. From various observations, he states, he is satisfied that intestine which has become rapidly distended is painful upon pressure; it is, however, a kind of pain which, *by attention, can generally* be distinguished from the acute tenderness of peritonitis."

This point of diagnosis applies altogether to the discrimination of cases of ileus from those of inflammation, and even as such, is, it would appear, often of doubtful value; but in what light must we view it, in reference to those frequent neuralgic affections, which, whether hysterical or the results of irritation of the spinal cord, are often established suddenly, with little preparatory disorder, and with no distension of the

* This article, which has appeared in the *Dublin Journal of Medical Science*, we republish at the request of the author, who has corrected several errors which had crept into the original impression.—Ed. Gaz.

intestinal canal to account for the acute tenderness on pressure? No medical man is now ignorant of the fact, that the contents both of the thorax and abdomen, as well as their parietes, are subject to attacks of a violent pain of a nervous or spasmodic character, yet with acute soreness to the touch, as in pure inflammations. These are so widely separated from the latter in their nature, and require such a very different, I might almost say opposite, mode of treatment, that a correct diagnosis becomes a matter of still greater interest than in cases of ileus. There are few instances of ileus in which one effective bleeding might not be of effective service, while there are few of hysterical pseudo-peritonitis, or enteritis, or of similar affections arising from irritation of the cord, which might not be made worse, or indefinitely protracted by it; yet we find in our best elementary works on this subject a most perplexing indefiniteness, a diffuseness of description, and a labouring at discrimination, wholly unworthy of the present improved state of medical science, and unnecessary, if any real or essential difference of character could be pointed out. It is, indeed, because there is an essential agreement in all material points, that our attention is directed to the attitude, the expression of countenance, the manner of complaining, and even the temper of patients, although there must be sometimes very considerable differences as to all these in individuals similarly affected, and in any case no slight degree of experience is required to form a proper estimate of their value. We are told that one affection is frequent, the other rare in comparison—that females are more liable to it than the other sex, and those of sedentary habits in towns, than those leading active lives in the country; all of which might be very useful information, so far as it tended to corroborate features of a more marked expression, but is essentially loose and vague if considered by itself. Again, we are reminded of one or two truisms; that if a disease has lasted long and done no mischief, or if it has been aggravated by an antiphlogistic treatment, its character is not inflammatory. We may thus arrive at a correct diagnosis about the time the complaint ought to be cured and forgotten. But the climax of our difficulties on this subject is displayed in the admissions of experienced physicians, that their practice, when in doubt, is to run the risk of erring on the safe side, and treat the disease as inflammatory; — perhaps a judicious plan enough under the circumstances, but certainly not so consolatory to the patient, nor, as I have elsewhere remarked *, very creditable to medical science. It may be questioned, too, whether a rule of the kind with young physicians would lead only to errors on the safe side. I have seen one valuable life lost, and others endangered, by such practice, and sometimes the antiphlogistic treatment vigorously adopted; not, indeed, where doubts existed in the mind of the practitioner, but where the cases were altogether mistaken.

I am far from assuming to myself a perfect freedom from perplexity in all possible cases simulating inflammations of internal organs which may come before me, but with the facts I have stated impressed on my mind, I cannot but feel that the experienced physician is usually too well satisfied with that indefinable power of recognizing or identifying diseases almost unconsciously acquired in the course of long practice. In reflecting on the melancholy steps by which it is attained—on the sad, though perhaps excusable, errors committed—he consoles himself with the conviction that such experience only could gift him with a knowledge which neither books nor lectures had taught him, when he should rather feel that the true reparation to his conscience, the real duty he had to perform in acquittance, was to prevent the occurrence of such mistakes with others, by analyzing the characters of those perplexing diseases, and endeavouring to trace the sources from which his late discrimination was derived. It is not enough for a practitioner in a difficult case to be assured he is himself capable of determining its nature; he should consider whether his knowledge or ability admits of being communicated to others; and when he believes it is, but not until then, he may also believe that he has acquired information of infinitely greater value to the public than any thing it could have suffered from his early mistakes.

I have been led to indulge in these observations in consequence of the apparent inattention with which a sug-

* See Treatise on Functional Affections of the Spinal Cord.

gestion with respect to the diagnosis of neuralgic affections, proposed by me some years since, was received by the profession: I then stated, that in any doubtful cases I believed if tenderness on pressure *at the portion of the spinal column corresponding with the disturbed organ* existed, it might be considered decidedly neuralgic; but if no such symptom was found, it was probably inflammatory. The suggestion was then offered rather as a result of individual observation, which I was anxious should be tested by the universal experience of the profession, than with a view of claiming attention for an incontrovertible fact; but I have since so repeatedly derived ready assistance in simulated inflammation, by assuming it as such, and have had the diagnosis so invariably borne out by the result, that I do not now hesitate to assert, it is almost the only single symptom upon which a young practitioner can rely without danger.

Without entering into the question of the nature of spinal irritation, which I have discussed at large in another place, I may be permitted to claim the reader's attention to two points connected with it, which must be regarded as physiological facts. That the spinal cord, as the experiments of Le Gallois have shown, is composed of portions independent of one another in their powers and functions, being centres from which the nervous actions of corresponding parts of the body emanate, and to which they tend; and, secondly, in conformance with the well-known law, by which the pain and tenderness arising from disorder at the origin or trunk of a nerve, is referred to, or felt at its extremity, that affections of the spinal cord are not usually recognizable by pain at the part diseased, but at the terminations of the nerves in distant organs arising from it. From these facts there is one undeniable inference in determining the diagnosis of cases resembling inflammation,—that wherever spinal tenderness exists, we must at all events set down pain and tenderness (the two most important symptoms in assisting us to detect internal inflammation) as wholly valueless; inasmuch as, whether there be inflammation or not, these are not peculiarly the results of it, but may arise also from the tender state of the cord. I might perhaps go much farther, and assume, that where spinal tenderness exists, there also exists a state of the system scarcely compatible with acute inflammation.

If, then, pain and soreness on pressure, those supposed characteristics of inflammation, are of all others the most equivocal symptoms, belong as certainly to irritative as to inflammatory affections, and almost necessarily exist if there be acute spinal tenderness; what is to be our guide in deciding the diagnosis when called to a person suffering with violent pain of side, feverishness, difficulty of respiration, and soreness of the intercostal muscles; or with violent pain in the abdomen, accompanied by exquisite tenderness to the touch, and perhaps constipation and vomiting—*if we do not examine the spinal column?* We want to ascertain the simple fact in the first instance, of whether the pain is in the viscus supposed to be affected at all, or whether it be merely in the thoracic or abdominal parietes. And since the patient shrinks and complains on pressure in both cases, what, I ask again, is to be our guide, *if we do not examine the spinal column?* Are we to depend upon speculations on the attitude, expression of countenance, temper or manner of a patient, when we can at once lay a finger on the spine, and detect both the cause and nature of his complaint.

If in the former case we find acute tenderness of some of the dorsal vertebræ, or in the latter of some of the lumbar, I do not hesitate to say, the one is not pleuritis, nor the other enteritis, nor will either bear large depletion with impunity. The pain and tenderness are merely referred to the extremities of the spinal nerves, ramified through the intercostals or abdominal muscles, from the affection of the corresponding portion of the spinal column, and indicate nothing whatsoever of the state of the viscera internal to them, which usually excites so much alarm. If these are facts, and I believe few will deny them to be so, on examining for themselves, is it not absolutely leading the young practitioner into those mistakes which we so much deprecate, to associate pain and tenderness on pressure so exclusively in his imagination with inflammatory diseases? Is it not strange too, that cases are every day published in our periodicals, with dissertations on the difficulty of their diagnosis, without the slightest allusion to the spinal cord, the

state of which, in every case of presumed inflammation, our present knowledge of physiology must show us the necessity of ascertaining *. One would suppose where the obscurity of the diagnosis is often so undeniable, that any adventitious light which could be brought to bear upon it would be sought for with avidity, but this, every day's experience assures us, is very far from the reality. As illustration is very generally more impressive than argument, I shall offer two or three cases to the consideration of the reader.

A young woman, aged 25 years, was attacked with pain in the bowels at night after a feeling of chilliness. She took some essence of peppermint and went to bed, but the pain gradually increased, and at two o'clock in the morning she took twenty drops of laudanum. At seven o'clock, the pain still continuing, she took castor oil, with ten or fifteen drops more of the laudanum, by the directions of an apothecary, and soon after ten drops were repeated in a saline draught. I saw her at one o'clock, and found her writhing with pain, chiefly round the umbilicus and to the right side. It became more violent by fits like colic, though never entirely subsiding, and during the intervals of comparative relief, she sometimes threw her arms about restlessly, sometimes lay as if insensible, with the eyes turned up and the lids half open. Her complaints were low, scarcely audible, her respiration painful when deep; turning from side to side increased her pain, although when the paroxysm occurred she turned sometimes on her face. There was excessive tenderness of the abdomen, the least pressure making her scream. She had been constantly vomiting for the last few hours. The castor oil had operated once scantily; her pulse was but little quickened, and there was no heat of skin.

Here was a case of constant pain in the abdomen, chiefly about the umbilical region, liable to severe exacerbations, attended by exquisite tenderness on pressure, vomiting and constipation, and continuing for twenty-four hours. I am convinced that almost any young physician would have felt great difficulty, indeed almost an impossibility, of determining, from a consideration of the symptoms, that the complaint *was not inflammatory*, and I believe that the great majority of either young or experienced ones would at once infer the existence of inflammation, and bleed. I say so from having witnessed it, and from having early in my own professional life always prescribed in such cases with timidity, as if I felt that all consideration of the symptoms led to little better than conjecture. I had now, however, new ground for a diagnosis in the state of the spinal column, on examining which my mind was set at rest. As soon as I pressed on the upper lumbar vertebræ the girl started violently, caught my hand, and complained that I had hurt her dreadfully: the pressure, she said, had increased the abdominal pain: she had never had any hysterical attack in her life. I ordered the abdomen to be fomented freely, and gave her five grains of calomel with half a grain of opium, directing five grains of aloes and five of extract of henbane, to be taken every two hours. The calomel and the first dose of the aloetic pills remained on the stomach, but the succeeding doses were rejected; a purgative draught was also thrown off: she then got a purgative enema, which was repeated in an hour, but both passed off without any appearance of fæces. The vomiting, pain, and tenderness of abdomen, continued very severely throughout the evening. At night she got a turpentine enema, and was placed in a hot bath,

* There was a paper from Dr. Samuel Cusack in one of last year's Dublin Medical Journals, "On certain Nervous Affections occurring principally in Females." It was an essay, in fact, on the treatment and diagnosis of those chronic pains below the mammæ, or between the false ribs and ileum, so often mistaken for phthisis, pleurisy, liver complaint, &c., to which public attention has been directed of late years by several writers, as instances of spinal irritation. Dr. Marshall Hall described them long since in his work on Diagnosis, and more at large in his work on the Diseases of Females. Mr. R. P. Player published a letter on the subject as long ago as 1821. Dr. Brown, of Glasgow, published precisely similar cases in 1828, demonstrating the connexion of the pain with the spinal cord, and since then we have had essays from Dr. Darwall, of Birmingham; Mr. Teale, of Leeds; and Dr. Marshall, of Manchester; all pointing out the nature of those pains, and the little connexion they had with a disease of the viscera apparently affected. It is of course open to any physician to publish cases and observations in support of particular views, however frequently placed before the public already by others; but it seems singular Dr. Cusack should conceive it necessary in 1834 to publish an essay on these affections, not only without the slightest allusion to their possible connexion with the state of the spinal cord, but without the least mention of any of those writers, to whom we are indebted for both the descriptions which he gives, and a diagnosis so much more accurate than his, in its not omitting an examination of the vertebræ.

which gave some relief, and procured a scanty evacuation. The pain, however, soon recurred, and she was ordered a grain of opium, to be repeated every hour until it should subside. The bowels were freely moved soon after taking the first dose, but she did not experience any considerable relief until she had taken the third, after which she fell into a sound sleep, and in the morning was in every respect improved. The pain had altogether subsided, and the exquisite tenderness was now felt in the right epigastric region only. She had threatenings of a return of the attack in the course of the day, but it was readily subdued by a repetition of the opiate. On the following morning there was scarcely any pain or tenderness, and if the complaint had been inflammatory, I would now have left the patient's bowels perfectly at rest. But believing it to be an affection of the spinal cord, arising from disorder of the digestive functions, I ordered another dose of castor oil, which operated freely, and was followed by no recurrence of the attack.

Mrs. ——, aged 30 years, of a full habit, complained of pain in the right iliac region, which gradually increased until the whole of the abdomen became sore to the touch; on the third day she took castor oil, which operated freely, but gave no relief. I saw her on the fifth day, when she complained of being much worse, and directed her to get to bed, to have the bowels fomented, and to take pills of aloes and henbane every second hour until relief was obtained. In the morning I received a letter, stating that she had been in agony all night, was much swelled, had not had her bowels moved for three days, and was now feverish and throwing every thing off her stomach. I became excessively alarmed, and regretted I had not bled her on the night before. On arriving at her residence, I found her complaining of violent pain all over the abdomen, but most acutely in the right iliac region, and almost down to the pubes on that side. There was fulness of the bowels, and the greatest tenderness on pressure. She could not bear the slightest touch in the iliac region, and one spot she described as exquisitely sore. It was on this account, perhaps, that she bore the weight of my hand laid flat, and pressed very gradually, better than pressure with the points of the fingers, as, in the former case, the pressure on the most painful spot was not so direct. Her pulse was ninety-six, her skin feverish, and tongue white; she had nausea and occasional vomiting, and could not turn or move in the bed, without considerably increasing her sufferings. The only symptom that could lead me for a moment to doubt that I had here a case of very serious inflammation to deal with, was the expression of the countenance, which did not betray the deep anxiety and distress I have usually seen in the inflammation of vital organs, although her own description of her suffering was sufficiently alarming.

The treatment of the case with decision and confidence now depended altogether on the examination of the spine. If I found a state of increased sensibility and excitement of that part of the cord which gave origin to the lumbar nerves, the pain and tenderness of abdomen would be accounted for, and I need not infer a more alarming cause for them. If, on the other hand, there was no spinal tenderness, the existence of acute inflammation was almost certain, and the most active treatment was demanded. On pressing the spinal column, as soon as I reached the lumbar vertebræ she started and screamed aloud. She also felt excessive pain on my touching the sacrum, or making pressure behind the trochanter, or at the front of the hip-joint in the groin. I therefore unhesitatingly concluded it was one of those nervous affections simulating inflammation, in which the progress of the case fully bore me out. A few leeches were applied to the most painful part of the abdomen, and a grain of opium was directed every second or third hour until there was some abatement of pain. She was also directed, as soon as the vomiting abated, to resume the pills of aloes and henbane, and take a dose of castor-oil. She got considerable relief, but passed a restless night. In the morning she took the aperient medicine, which operated freely, and now had pain occasionally only, and at long intervals; the vomiting had ceased, but the soreness of the abdomen was still exquisite in the right ileum and groin, and she screamed when I pressed on the vertebra, or immediately behind the trochanter. Fomentations were now directed; belladonna plasters were afterwards laid over the painful parts, and the opium pills were given every fifth or sixth hour. She spent the day well, but the pain recurred in the night very

severely, and was relieved by the anodynes. Next morning the bowels were agained moved, but the soreness on pressure, or on moving much in the bed, still continued. The case went on in this way for several days, abating very gradually, but the soreness of the abdomen and of the hip-joint was not perfectly removed until she was for some days driving out in her carriage.

I attended this lady afterwards for an attack of acute bronchitis, which was of a similar character in its advanced stages. The cough, oppression, and expectoration, were evidently the result of nervous irritation, and required tonics rather than the continuance of any antiphlogistic treatment. She told me that in a former illness, which she called inflammation of the lungs, the doctor had bled and, I believe, blistered her more than once; that she was going on from bad to worse, with incessant cough and debility, until at last, in defiance of all advice, she took a glass of pure wine, which cured her like a charm. I mention this, not that one can infer much from such loose statements, but because it gives some idea of the irritability of her nervous system.

Mrs. ——, of a delicate nervous habit, after a natural labour, had internal hæmorrhage, with pallid countenance, cold clammy sweats, chilliness, and an almost imperceptible pulse at 156. The hæmorrhage ceased on the extraction of several clots with the hand, but the debility continued to an alarming degree for several hours. She had large doses of laudanum, with dilute sulphuric acid, through the night, which seemed to relieve her much; but in the morning the debility was still great, the pulse weak at 130, the features sunk, and the respiration much hurried. On the following evening she had a severe rigor, and was soon after attacked with pain and tenderness in the uterine region, excessive pain in the head, brow, and eyes, with sickness of stomach and vomiting. There were thirst and heat of skin, and the pulse became rather hard at 140; the tenderness on pressing over the uterus was considerable, the pain constant, the lochia diminished. On examining the spine, there was found acute tenderness of the lumbar vertebræ, upon which it was assumed to be a case of nervous irritation, and not inflammation. A dose of calomel with extract of henbane was given, fomentations were applied to the lower part of the abdomen, and she got diaphoretics at intervals. Under this simple treatment the symptoms declined, and on the succeeding night she felt quite relieved; the lochia and secretion of milk becoming abundant, and the pulse soft at 125. After the lapse of some days she was up and well.

Mrs. M——, a married woman, aged 26 years, had very severe flooding in her lying-in. On the fifth day after, she was seized with pains in the abdomen, attended by excessive soreness to the touch, and fever. She got castor oil on the sixth day, which operated twice without giving much relief. In the evening she had a slight rigor, and felt very weak. The milk had left her from the first moment of the attack, and the lochia had nearly ceased. I saw her for the first time on the night of the seventh day from her delivery, and found her lying on her back, with her knees up, complaining much, and incapable of the least motion on turning to one side or the other without the greatest torture. The pain was constant, but was increased to an excessive degree at intervals; coughing was very distressing to her, and the least pressure on any part of the abdomen made her scream. Slow, steady, cautious pressure with the flat of the hand was unbearable, but she could stretch down her limbs without increasing her sufferings. Her countenance, which was pale from the flooding, had an expression of distress, and the brows were knit as with pain. The skin was warm, the tongue moist and white, and the pulse weak, at 112. There was excessive tenderness of all the lumbar vertebræ. The abdomen was fomented, and she got two grains of calomel and a grain of opium every third hour. After the second dose the pain abated, and she got a good deal of sleep; but in the morning the symptoms returned, and the pills were resumed with the same good effect as before. The tenderness of abdomen was now rather less, though the bowels appeared more full, not having been moved for the last forty-eight hours; she could turn from side to side with less suffering; the pulse still 112, and the skin warm and moist; she took castor oil, and afterwards pills of aloes and extract of henbane every second hour, which operated freely; she passed a tolerable night and seemed easier, but got the pain more violently than ever on

the following morning, when it was relieved by forty drops of laudanum; it continued in the intervals of these paroxysms, but not severely. In the evening the paroxysm recurred, and was again relieved by the laudanum. Notwithstanding these recurrences she felt herself on the whole much better, could turn from side to side with more freedom, and wished for nourishment; she complained of some headache. She was now directed to take three grains of sulphate of quinine three times a day, and to repeat the laudanum if seized with the pain. I also allowed her to get a little chicken broth or beef tea. She passed a good night, and although the pain recurred at intervals on the following morning, it was much less severe; she threw up some aloetic and henbane pills which she had taken to free the bowels; the abdomen, though still painful on pressure, was much less tender; the soreness of the spine was nearly gone, and her milk was returning. As her bowels had not been moved for the last thirty-six hours, she got some castor oil, and the quinine and broth were continued; she complained much of headache.

The pain recurred again violently in the night, soon after which the flooding returned for a short time, and then ceased. The pain was relieved by a grain of opium; felt much better through the day, and ate a little meat without permission; the soreness of the abdomen almost gone, and none whatsoever of the spine; her headache was better; she continued her quinine and nourishment, and was well in a few days*.

I might multiply cases of this nature to an extent that would be tiresome, without making the point much clearer. Perhaps it may be said, that an experienced eye would have detected some anomalous symptoms in all of these, which would have led to doubts of their inflammatory nature. I am not disposed to deny that much may be inferred in such attacks from the suddenness with which violent symptoms supervene, the absence of deep distress and anxiety of countenance, and, above all, from a freedom in the movements of the lower extremities unusual in acute abdominal inflammations. There was, indeed, at least one of these discrepancies observable in a greater or lesser degree in each of the cases detailed; but how are young practitioners to form a diagnosis on such grounds? People suffer similar degrees and kinds of pain with very dissimilar degrees of fortitude; and, at all events, any reasoning on such signs must be founded on comparisons, which, to be worth any thing, would imply an experience no young practitioner can be supposed to possess.

In all acute inflammations of vital organs, I believe that no spinal tenderness will be found, except where it existed previous to the supervention of the attack*, or where the spinal cord itself happens to be the seat of such inflammation. In all neuralgic affections, on the contrary, tenderness of some portion of the spinal column, *usually that corresponding to the affected organ*, may be detected, except in some rare cases, in which it seems probable the ganglionic nerves alone are concerned. As these cases must still present a difficulty in their diagnosis, we must rest contented with those general characteristics, which, however vague or liable to lead us into error, are all we have to guide us, and all we have hitherto had to determine our opinion in that large class of neuralgic affections, for the detection of which I have here been offering a new, and I believe less doubtful sign.

* The above case, at the first moment I was called to it, so perfectly answered the descriptions given of simple peritonitis (see Abercrombie on the Viscera, p. 151), and so truly resembled the cases of that disease which had fallen within my own experience, that I watched its progress with much anxiety. I was, indeed, somewhat distrustful of the diagnosis; for although the extreme tenderness of spine would fully account for the tenderness of abdomen, the great torture experienced on the least motion from side to side was a symptom more characteristic of true peritonitis than of a neuralgic affection; the progress of the complaint, however, fully satisfied me of its nature. I believe there is no practical physician will assert that a case of acute peritonitis would have been arrested by the treatment adopted, which was, in fact, little else than palliative. It was only on the first day of my attendance that the opium, combined with calomel, was given with any regularity, five grains having been taken within twenty-four hours; for although the pain recurred with equal violence, subsequently she had seldom occasion to take an opiate more than once or twice in the day. I may, however, point out one symptom in which the case differed from peritonitis--the ease and freedom with which she could stretch down her limbs. In spinal affections the least motion of the spine, especially turning or twisting motion, will sometimes increase the abdominal pain, but it scarcely ever occasions difficulty or uneasiness in the motions of the lower limbs.

* Some writers on spinal irritation state that they have found spinal tenderness, with inflammation of liver.

The observations offered respecting the diagnosis of cases resembling acute inflammations, apply with almost equal truth to those resembling chronic diseases; I mean those pains affecting the chest, and attended by cough and perhaps oppression, leading to apprehensions of phthisis—the side, between the false ribs and ilium, suggesting affections of the liver or bowels—or the pubic region simulating disease of the womb or ovaries. It is, however, wholly unnecessary to extend this paper to an unreasonable length on the subject of those nervous affections, the nature and diagnosis of which I have discussed so fully in another place; I need only remark, that deducing inferences from acute or chronic pain, apparently affecting any viscus, without examining the state of the spinal cord, seems to me little less absurd than omitting to examine the state of the hip-joint in those painful affections of the knee, the nature of which is not immediately obvious. In either case the disease may not exist at all in the part apparently affected; and the real source of the pain can only be ascertained with certainty by an examination of the origin of the nerves distributed to it, or of any organ with which the part affected may be supposed to sympathize.

ON THE

THERAPEUTICAL EFFECTS OF IODINE,

GIVEN IN VERY LARGE DOSES,

In the forms of Iodide of Starch, Hydriodic Acid, and Iodide of Potassium.

By Andrew Buchanan, M.D.
Junior Surgeon to the Glasgow Royal Infirmary.

[Concluded from p. 47.]

Noli me tangere.

Under the head of noli me tangere and lupus, surgeons comprehend certain ulcerative affections of the nose, the intractable nature of which seems to have suggested the first name, while the second is expressive of the wide-spreading destruction of parts which they not unfrequently occasion. There appear to be three distinct affections to which these names are often indiscriminately applied. The first seems to have its seat in the bones and cartilages of the nose. The ulcers of the surface occur only on the nose, or on parts in the immediate vicinity, being apparently a mere secondary affection, excited and kept up by the deep-seated irritation. The other two diseases have their seat in the cutaneous tissue; the evidence of which is, that they often affect other parts of the skin, as well as that covering the nose. The one appears to be a disease of the strumous kind; it comes out in the form of papulæ and small pustules, having irritable inflamed bases, which speedily become the seat of ragged superficial ulcers. The other is the cancer of the skin, which, while it may occur in other situations, is very often observed on the nose.

The two following cases are examples of the first and second of these diseases. In the first a complete cure was effected under the use of iodine. It ought, however, to be borne in mind, that in such cases, on the diseased bones, which are the great source of irritation, being discharged, a spontaneous cure is often effected. In the strumous disease of the skin the benefit obtained was much less considerable.

Agnes M'Ilwee, æt. 12, spinner. January 7th: Left half of upper lip is the seat of an irregular unhealthy ulceration, with thin edges, no granulations, and pretty deeply excavated in several places. Discharge is thin and serous, concreting into yellowish scabs. Integuments stretching from nose upwards and outwards towards right malar bone, are red and chapped. Disease appeared about twelve months ago, healed spontaneously, and reappeared six weeks since, cold weather seeming to be its exciting cause.

Three years ago ulceration of throat attacked her, and ended in complete destruction of velum palati, and partial destruction of roof of mouth. Several pieces of bone were discharged, and there is now an oval opening into nostrils, the posterior part of septum of which is destroyed. No pain in diseased parts; glands under angle of jaw considerably enlarged. General health pretty good No treatment.

8th.—Sum. ter indies Iodid. Amyl. 3j. m. s.

13th.—Little change on symptoms.

Augeat. dos. Iod. Amyl. ad. ℥ss. ter indies.

27th.—Ulcers of lip every where

cicatrized, except a stripe along margin of mouth, which is covered with a dry scab. A considerable portion of septum and maxillary bone have been removed, and there is no longer any discharge from nose. Medicine agrees well.

Feb. 23d.—Dismissed cured.

Ann Smith, æt. 17, weaver: March 6th.—About six years ago, observed a small excoriation, discharging a thin serum at lower part of septum of nose. It remained stationary for two years, when discharge became more consistent, and a scab formed, and since that time superficial ulceration and scabbing have been spreading, till now the tip also, and septum of the nose, are involved. The scabs are of a yellowish-green colour, and on separating, leave the subjacent parts in a state of ulceration. About 12 months ago, small papulæ formed upon left cheek; they discharged from their summits thin purulent matter, which concreted into scabs of the same character as those on nose. About nine months since a similar eruption appeared on each side of neck, and there is now a stripe of superficial ulceration, covered with green scabs, extending from lobe of ear downwards to near clavicle. Right cheek became affected six weeks ago.

Back of neck is swollen, and indurated from about the 3d to the 7th vertebra, swelling extending the whole breadth of neck. It is attributable, apparently, to the irritation of a seton inserted in May last, and followed by an attack of erysipelas.

General health not much affected; catamenia absent for nine months. Was a patient in this house in May and June last, when Nitr. Argenti, and other local applications, were of little service, the cure being apparently affected by the attack of erysipelas.

℞ Iodid. Plumb. ʒj.; Axungiæ, ℥j. M. F. unguent maculis impetiginosis adhibendum.

Sum. Iodid. Amyl. ℥ss. ter indies.

April 28th.—Dismissed, considerably improved.

Cancer.

A very complete trial was made of the hydriodic acid in a case of cancer of the mamma, but unfortunately with no other result than that which has hitherto followed every attempt to find a remedy for that terrible disease. It is needless to insert the case at length. The woman was 40 years of age, and the tumor of 3 years' standing. She came into the hospital for the purpose of having it removed. The operation was prevented by an attack of erysipelas, which came on the very day fixed for performing the operation. On the subsidence of the erysipelas, several lymphatic vessels were found, hardened like whip-cord, and an enlarged gland above the clavicle. All thoughts of excision were therefore abandoned, and the patient put upon the liquid hydriodic acid. It should have been mentioned in the former part of this paper, that the strength of this liquid acid is exactly the same as that of Coindet's tincture of iodine, if, in preparing the latter, the quantity of alcohol be determined, as I believe is commonly done, not by weight, but by measure. In that case an ounce of either preparation contains ℈ij. of iodine. Of the liquid acid the patient took ℥ss. three times a day, equivalent to ʒj. of iodine, commencing on the 13th February, and continuing without any intermission till 26th March.

She took, therefore, in all, upwards of ℥v. of iodine. The effects of this very large quantity upon her complaint may be judged of, from the report made on the day the medicine was intermitted.

March 26th. — Has used hydriodic acid since last report; no change in glands of axilla, and above clavicle. Tumor of mamma larger, and ulceration deeper, more extensive, and very foul. Little change in pain, though for the last two days it has been aggravated. Pulse 84; general health pretty good. Dismissed, with advice.

Tumors.

Mrs. Gibson, æt. 34. August 8th: Seven months ago, leg became affected with considerable pain and erysipelatous redness; this shortly afterwards subsided, and upper part of leg began to swell: since then it has gradually increased to present size.

On admission, calf of leg measures two inches more than opposite one in circumference. On internal side it is pretty hard, and unyielding; at external part it is soft and elastic, but no fluctuation can be recognized in it. Tumor is somewhat, though not very, moveable; seems to arise deep among the muscles, and does not appear to be attached to

any of the bones. Says it is the seat of constant pain, sometimes lancinating.

Dismissed cured.

This patient was put upon gr. xv. of the iodide of potassium daily, and directed to rub frequently the leg with an ointment containing the same medicine, and to abstain from motion. Under these means the swelling gradually disappeared; and when she left the hospital on the 2d October, there was no vestige of it remaining.

Nothing could be more unexpected than the issue of this case, and it excited much surprise in all who witnessed it. The fact that at a consultation, held after her admission, several of the gentlemen were of opinion that the limb would ultimately require amputation, shows that the tumor was one of no trifling description.

It is right, however, also to mention, that the cure was not permanent, as will be seen from the following report, taken on the readmission of the patient into the hospital on the 20th December. This report I insert, as marking the peculiar nature of the disease, as upon that peculiarity, there can be little doubt, depended altogether the efficacy of the remedies employed.

Dec. 20th.—Leg continued free from swelling and pain for about a month after dismissal. About this time, after exposure to cold, began to experience lancinating pains in the part formerly affected, which became soon after swollen, and gradually increased to the same size as at former admission. Continued the iodine for some time after being dismissed; but she has undergone no treatment for the last six weeks. Being at present in the ninth month of pregnancy, she is dismissed with advice till after delivery.

Lepra and Psoriasis.

John M'Lellan, ætat. 32, labourer. Jan. 17th: Extremities are the seat of a scaly eruption, which commenced about two years ago around knees and elbows, in the form of roundish patches, slightly elevated, and surmounted by shining white scales. These have now coalesced into large blotches, rough, red, and scaly, with occasional small fissures scattered through them. Experiences no uneasiness from complaint. General health good.

Sum. Iodid. Amyl. ʒss. ter indies.

Jan. 24th.—Spots on skin somewhat less red and scaly. Iodine does not produce costiveness, and in other respects agrees well.

Augeatur dosis ad ʒj.

Feb. 23d. — Patches on arms and trunk gone for some time, and natural texture of skin restored. Still a little redness, and some vestiges of spots on lower limbs. Has taken since the 18th ult., ʒxcvi. of the iodide of starch, equivalent to ʒiv. 3vi. gr. xxiv., or 2304 gr. of iodine. The medicine gave the usual tinge to the secretions, but did not produce costiveness, nor any other inconvenience.

Feb. 26th.—Dismissed cured.

In another case of psoriasis some benefit was derived from the iodine, but it was by no means so marked as in the preceding case. A full trial of it was not made, as the patient was remitted to the physician on my ceasing to take charge of the surgical wards, in May last. In the case of Purdie, (ward No. 8.) admitted for an ulcer of the leg, but also affected with lepra of twelve years' standing, the iodine appeared to be of service. She commenced the use of the iodide of starch in the dose of ʒss. three times a day on the 12th January, and on the 13th February the eruption was nearly gone. But as the disease usually got better in the spring, the amendment may have been owing to the season as much as to the remedy. I may further mention, that in a case of lepra which I treated in private with the iodide of starch, in the dose of a tea-spoonful three times a day, a cure was effected in about six weeks.

Ichthyosis.

Donald M'Donald, æt. 19, shoemaker.—Nine days ago, and three after impure connexion, observed some small pustules on glans; they were at the time productive of no uneasiness, and were in consequence neglected. Five days ago, after a debauch, observed prepuce to be swollen and painful, and next day complete phymosis came on. Swelling gradually extended upwards, till the whole penis became affected. On admission, swelling is so great, that glans cannot be uncovered. Penis is of dusky red, and prepuce is beginning to assume a livid appearance at its upper part. Glands in groin are very slightly enlarged; some fever; pulse 90; tongue white.

Whole body, but particularly front of

thighs and legs, is the seat of a scaly eruption. Scales on thighs and knees are small, thick, of a greenish colour, and closely set, somewhat resembling shagreen in appearance; in other places they are large, thin, and light coloured. On desquamating, skin is left rough and tender. This eruption he avers appeared three days after connexion. Denies previous infection. Has been using mercury for the last four days, and his mouth is slightly affected.

Circundetur penis cataplasmate.
Utatur Mistura emeto-cathartica m. s.

March 12th, day after admission, fore part of prepuce gave way by sloughing, and glans protruded through opening. Fore part of prepuce removed by knife, and leeches applied to penis, with barm poultice. Sloughing quite stopped, cut surface having a healthy aspect. General excoriation of surface of glans, and one small elevated sore; no discharge from urethra; skin as at admission.

Sum. Iodid. Amyl. ℥ss. ter indies.

15th.—Medicine agrees well.
Augeat. dosis ad. ℥j.

25th.—Wound from circumcision now healed. Still superficial ulceration of glans, to which solution of Nitr. Argenti has been applied. Scabs on limbs somewhat less dense. Iodine agrees well, and urine deeply tinged.

Utat. Baln. Calid. Calore grad. 110 ad 120.

26th.—Could not endure bath hotter than 105°. Neither in perspiration from forehead, nor in water of bath, could any iodine be detected.

April 28th.—Skin now well; penis completely cicatrized. Dismissed cured.

It is necessary to state, with respect to this patient, that he came into the hospital for the venereal affection first described, and that no reliance can be placed on the very improbable account given of the origin of his cutaneous disease, as he spoke and understood English very imperfectly, and varied in his statements every time he was interrogated.

I conclude the subject of cutaneous diseases by saying that, in a case of impetigo sparsa, a cure was effected under the use of the liquid hydriodic acid, internally, and the citron ointment as an external application, and that no benefit was derived from the iodide of starch in a very obstinate case of porrigo favosa.

HOMŒOPATHY UNPHILOSOPHICAL AND QUACKISH.

To the Editor of the Medical Gazette.

Sir,

The essence of the inductive philosophy of Lord Bacon has been truly said to consist in *ascertaining the universality of a fact.* This was the method which this illustrious philosopher,

"The great deliverer, he from whom the gloom
Of cloistered monks, and jargon-teaching schools,
Led forth the true philosophy,"

recommended us to pursue in our inquiries after truth. Prior to his time, the logic of Aristotle held an usurped dominion over the kingdom of science, and the syllogism was universally considered a tribunal, from whose decisions there could be no appeal.

All the errors which have crept into science—all the false conclusions which have been deduced from the investigations of particular branches of knowledge—have originated in a neglect of the important rules laid down by the author of the *Novum Organum.* There is not a more remarkable instance on record of the folly of generalizing from a few particulars, than that exhibited by Hahnemann and his followers. From the examination of a few insignificant facts as the basis, they have created a mighty superstructure, which is designated by them, with pomp and parade, "the science of homœopathy!"

If the principle which the homœopathists consider to be unequivocally established be founded on a logical deduction from admitted premises, the whole system of medical treatment adopted by "allopathists" must be founded in error. Once admit the truth of the homœopathic theory, and the science of medicine must undergo a revolution!

Before I consent to remodel the whole fabric of medicine, and to abandon the principles which I have been taught to consider to be founded on a correct view of the character of disease, I naturally ask myself a few questions. In the first place, is such a medical change necessary? Is our present system, as taught in the schools, so grossly imperfect as to require such a thorough regeneration as the homœopathists would lead us to believe? Every practitioner must admit that there are diseases which frequently baffle the united skill of physician, surgeon, and apothecary, and

that the science of medicine, as at present established, is justly called an "*uncertain*" science, and this uncertainty must exist, so long as medical men have to deal with *living* beings. If the homœopathists can make medicine an *exact* science, and can point out to me a more successful mode of treating those diseases which are considered by us, under certain circumstances, as incurable, I will willingly consent to throw aside all my preconceived ideas, and confess myself a proselyte to homœopathy. If I am travelling one road to a certain point, and a man comes up to me and recommends me to change my route, I naturally ask him to point out to me the advantages which I am to derive from the change?—if there are none, I prefer following the dictates of my own judgment. What has been said by Paley of religion, may not inaptly be applied to physic. A man is at liberty to think as he pleases on the subject of religion; but he ought not to be allowed, by the magistrate, to teach to others doctrines at variance with the established creed of the land, and inimical to the divine word of God.

With regard to physic, Morison, Eady, and the Homœopathists, may imagine they have discovered a "royal" and a *rail-road* to health; but they are not at liberty to compel others to travel this road, when it is certain it will tend to their destruction.

Government ought to have it in their power to put a stop to the practice of men, when that practice can be proved to be detrimental to the public good.

In the case of the much-lamented death of Madame Malibran, as you justly observe, the treatment adopted during one short hour, in her precarious state, may have made the difference between life and death. The danger arising from the practice of homœopathy is similar to what is likely to accrue from any other description of quackery. It is not that there is any thing pernicious in the medicines they administer, but the evil lies, as Sir Gilbert Blane observes, *in the false confidence which is inspired, to the exclusion of other and better remedies* *. I speak, sir, from personal observation of the evils resulting from their tampering with the life of a fellow creature. Not many months ago, I was called in to a serious case of inflammatory disease, in consultation with a gentleman who was treating the case homœopathically. It was not long ere I perceived that the patient's life was in jeopardy, and I feel assured, that if active remedies had not been had recourse to, the patient would have been lost.

A practitioner is called in to a serious case of enteritis; carrying out the homœopathic principle, arsenic and powerful stimuli ought to be administered, because, when these medicinals are taken in a state of health, symptoms similar to those arising from intestinal inflammation are produced! "*Similia similibus curantur*," say the homœopathists. Need I say what would be the consequence of this treatment?—death, as a matter of course, in ninety-nine cases in a hundred.

I will suppose another case:—A man has taken arsenic, or laudanum, for the purpose of putting an end to his existence, and stupor, or acute gastric inflammation, is the consequence. If the homœopathists practised the doctrines they taught, they would administer small doses of the *very drug with which the patient had been poisoned!*

Iodine I have found to be almost a specific in certain cases of secondary syphilis, and in a variety of cutaneous affections; but I never yet saw symptoms resembling, in the remotest degree, syphilis, arise from the exhibition of iodine to a person with an indurated liver.

In opposing homœopathy, I would not run into the opposite extreme, and consider the beneficial effects of a medicine to increase in a ratio with its dose; neither will my credulity allow me to believe that a *millionth* part of a grain of calomel, given every two hours, will impede the disorganizing progress of an acute attack of *iritis:* the idea is preposterous!

I cannot bring myself to believe that these practitioners act up to their own principles. They may *talk* and write about their surprising cures, and persuade the credulous that they were treated homœopathically, but it is my firm conviction, that, should one of these practitioners be attacked with inflammation of the brain, or by any other serious organic disease, he would quickly abandon his own crude notions, and submit himself to the ordinary mode of treatment. This is the best mode of testing a man's belief in a particular doctrine. It may be said that a man

* Medical Logic.

may "know the right, and yet the wrong pursue," and that he may preach, and yet not have the moral courage to *practise;* but he who knows any thing of disease, will not, if life be sweet to him, trifle with himself by neglecting the surest mode of arresting its progress.

I remain, sir,
Your obedient servant,
FORBES WINSLOW,
Member of the Royal College of Surgeons, London.

48, Hertford-street, May Fair,
Oct. 8, 1836

CASE OF POISONING BY FISH.

By HENRY BULLOCK, M.R.C.S.

ELEANOR MERWICK, ætat. 39, of good general health, partook, in common with her family, at dinner, of muscles, which had nothing peculiar either in their smell, taste, or general appearance, at one o'clock, on Thursday, September 22, 1836. Her account is, that having eaten about a dozen, she, in about a quarter of an hour after, experienced great uneasiness, and a sense of weight at the epigastrium, which continued increasing for about an hour, when a sensation of numbness and tightness of the surface generally supervened, immediately followed by the formation of large, red, and white prominent patches upon various parts of the body, accompanied by an intolerable itching and a very tormenting heat, while the eye-lids and face were enormously swollen and red. Two hours having elapsed, and the intensity of the preceding symptoms rather increasing than diminishing, she was seized with a violent suffocating dryness of the throat, and with oppression at the chest, attended with the most urgent dyspnœa; her eyes were also suffused and discharging copiously, and she complained of cramp in the calves of the legs. About this time I saw her, when the pulse was rapid and the tongue crimson, whilst her body was literally covered by this violent form of urticaria, so that she appeared to be suffering the most extreme agony. I directed her immediately to drink largely of milk, and to repeat it at short intervals. In about an hour the symptoms began to abate, the heat and irritation of the skin first subsiding; the breathing was next relieved, and all the symptoms gradually and rapidly disappeared, so that at seven o'clock, after having slept half an hour, she awoke, being perfectly well, and has continued so ever since. It is to be remarked that this woman was the only one of the party who suffered from the effects of the meal, and that she had experienced a similar attack twelve months since, after eating muscles.

In this case, it would appear that the poisonous effects of the muscles arose from idiosyncrasy, since the patient had previously suffered a similar attack from the same exciting cause; also from the remainder of her family having eaten of the same food with perfect impunity. The treatment adopted was that usually pursued at St. Thomas's Hospital with universal success.

Möhring De Mytilorum, &c. has related several cases precisely similar to the above, with one exception, namely, that the chest symptoms preceded the cutaneous irritation, and all his patients recovered under the use of emetics, which appears to be the practice recommended by Beck, and most authors. A number of cases, however, are recorded in the *Gazette de Santé*, relieved by æther, the eruption having given place to the most urgent asthma. Dr. Dulong has also given æther, but in his case slight mention only is made of a very temporary and partial eruption, with swelling of the eye-lids and face. The asthma was distressing.

From the reported cases in which æther has been employed, and from what we know of its action upon the system, it would appear applicable only at a later period of the disease, and in those cases in which the dyspnœa is the most prominent feature.

The treatment by milk exemplifies the efficacy of a remedy, the mildest, perhaps, employed in medicine, and peculiarly successful, at the same time possessing many advantages in these cases, over the use of emetics, both as it greatly shortens the duration of the disease, and consequently the anxiety and physical sufferings of the patient. It is perhaps difficult to explain the *modus operandi* of this remedy. Is it not highly probable that the irritating matter in the stomach combines with the milk in coagulating, and that in consequence of this chemical change it

is rendered insoluble, and hence becomes innocuous, in a manner somewhat analogous to the action of albumen on corrosive sublimate?

St. Thomas's Hospital,
Oct. 10, 1836.

PHYSIOLOGY OF THE NERVES AND MUSCLES OF THE EYE-BALL.

To the Editor of the Medical Gazette.

Sir,

The polite manner in which Mr. Hunt accuses me of literary dishonesty, and the courteous terms in which he charges me with a want of courtesy, must have a powerful effect in restraining me from any undue severity in my remarks upon his letter, dated Sept. 26.

It will be well known to many of the readers of the Medical Gazette, that I have, on several occasions, addressed them on the subject of the nerves of the face and of the eye: more recently my attention has been directed to the nerves of the eye-ball in particular. With respect to the paper which was read at the late meeting of the British Association, the object of it was to give what I hoped would be considered a complete explanation of the physiology of the nerves and muscles of the eye-ball, which I believed had not hitherto been done. With that object in view, I was anxious to ascertain what was the precise condition of the state of our knowledge on this subject up to the present period. In so doing, I gave a brief abstract of all that I knew, and mentioned the various views and opinions of different individuals, as far as my knowledge extended; pretending to have discovered nothing myself, but simply endeavouring to draw conclusions from these various sources that should be rational and satisfactory.

In the course of my inquiry, I thought it right to mention a view which had been promulgated by Mr. Hunt, and which I regarded as a very rational view, otherwise I should certainly not have brought it forward as I have done. This view of Mr. Hunt's, however, I could not consider but as still leaving the matter far from being settled, and very imperfect. So far as adopting that solitary view goes, my explanation accords with Mr. Hunt's, but no farther; and that view I have attributed to him in, what I thought, very distinct terms. What were the words which I made use of?—"I cannot close this paper without observing that my colleague, Mr. Hunt, first suggested the probability that the complexity of the nerves of the orbit was connected with the varied motions of the two eyes which I have pointed out." Who, that reads the foregoing paragraph, can doubt "whether (in Mr. Hunt's words) Mr. Walker has made sufficient acknowledgment of the use he has made of the discoveries" of Mr. Hunt? Discoveries!—what has Mr. H. discovered? Did he discover the oblique muscles, or the fourth and sixth pairs of nerves?—or does he pretend to have discovered, that, when we look at an object laterally, one eye is turned inwards and the other outwards? If he does, he may rest assured that no one, either in or out of the profession, will ever acknowledge any such claims. Mr. Hunt has the merit of being the first to suggest what I have above attributed to him, and that is all that he can lay claim to; and it has been willingly and properly acceded to him.

It may suit Mr. Hunt's purpose to say that my views are similar to his "with one exception, viz. the action of the superior oblique muscle." Mr. Hunt very well knows, however, that there is something more than this: he knows that some important conclusions were drawn relative to the fourth nerve; that the superior oblique was considered as the antagonist of the external rectus in one eye; and that these muscles were associated in the action of the two eyes, when directed laterally. In short, if Mr. Hunt had said that my views were *dissimilar* to his, "with one exception," &c., he would then have stated exactly what is the case.

Mr. Hunt, to the best of my recollection, not only argued that the superior oblique turned the eye outwards and downwards, but farther, that he was the *discoverer* of this action. Whether he still reckons this as one of his discoveries, I know not; I only know that it was first suggested by Albinus, and is now maintained by Sir Charles Bell and many others. So far from Mr. Hunt's view settling this question, indeed, I do not believe that he offers a single reason for the fact, that the supe-

rior oblique has a separate nerve as well as the external rectus.

Having thus, as I trust, fully answered the charge of appropriating Mr. Hunt's discoveries, I will proceed to make a remark or two on his other accusation—of want of courtesy. Does Mr. H. consider that, because he, two years ago, offered a suggestion in his introductory lecture, and last year read a paper before the Medical Society, in which he repeated the suggestion—does he suppose that the subject of the physiology of the muscles and nerves of the eye-ball is therefore to be laid under a ban, to be tabboed, and that no one must approach it until he repeats the suggestion in some other form? Was it not sufficiently published by being delivered in a public lecture-room, and proclaimed to a meeting of a public society, for me to allude to in reading a paper before another society, or in another lecture-room? That it has been published at this time in the MEDICAL GAZETTE, Mr. Hunt may thank himself: it was owing to the representations he thought proper to make amongst the profession here, that I was induced to request you to give it a place in your columns, in order that the profession might judge for themselves whether or not I had done an act of injustice, and with them I willingly leave it for decision.—I have the honour to be, sir,

Your very obedient servant,

JOHN WALKER.

Manchester, Oct. 4, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

The Human Brain: its Configuration, Structure, Development, and Physiology; illustrated by references to the Nervous System in the lower orders of Animals. By SAMUEL SOLLY, Lecturer on Anatomy and Physiology in St. Thomas's Hospital, &c. &c. With Twelve Plates.

THE title of this book amply points out the nature of its contents. The subjects embraced in it are of wide extent, and include some of the most obscure questions in physiology; we may add, that they have been treated by Mr. Solly in a manner that reflects the highest credit upon his industry and talents. He has presented us with an useful summary of the most valuable results that have been recently obtained by the several anatomists and physiologists, at home and abroad, who have cultivated this subject; this by itself is an acceptable offering to the profession, but we have besides numerous important observations of the author's own, both on the structure and physiology of the brain.

When we cast even a cursory glance over the names of the writers whom Mr. Solly is called upon to quote, we cannot but perceive that it is essentially a new department of physiology of which he treats,—that it is one which has risen up as a distinct inquiry in the present day. So long as it was considered that the brain itself was the primary part to be investigated, and that it was the source of a nervous power common as regards the nerves of the body, no progress could be made; but when it was announced that a certain series of nerves, arising from a particular tract of the brain, were endowed with properties perfectly distinct in their nature from another series arising from a different tract, then the investigation assumed a new character. It is obvious what the next step in the progress must be. As the tracts of nervous matter prolonged from the brain, or towards the brain, were proved to give origin to nerves possessing distinct endowments, the inference was drawn, that these tracts themselves must likewise be distinct in their nature from each other. Hence the chief objects of interest became, on the one hand, to ascertain with accuracy the proper functions of the several nerves, by observing the organs which they supplied by judicious experiments; and, on the other hand, to trace through the brain the columns of nervous matter with which they were connected at their roots. By these means, and with the assistance of pathology, which, in a subject like this, may be regarded as taking the place of experiment, it was reasonable to expect that we might acquire some distinct knowledge of the uses of the parts situated deeply in the brain. Comparative anatomy would also lend us most valuable assistance. But it is obvious that the foundation of all reasoning on the func-

tions of the tracts in the brain, must be a correct knowledge of the particular uses of the nerves which arise in groups or in succession from the different subdivisions of the cerebral mass.

Such considerations have led us to examine with peculiar interest that part of Mr. Solly's work which treats of the functions of the individual nerves; and we have been gratified by finding that he presents a very correct account of them. We have also been pleased to perceive a liberal spirit displayed by him in bestowing credit where it is due upon those gentlemen who have contributed most to improve our knowledge on these points. There are some mistakes, however, in regard to those to whom we are indebted for some of the discoveries alluded to. In particular, it has surprised and disappointed us to find no notice taken of the labours of an anatomist who exhibited great zeal and intelligence in prosecuting these inquiries at their commencement; — we allude to the late Mr. John Shaw, whose loss to science, at the time when engaged in those very pursuits, and when he had begun to gain a high reputation, was universally deplored by the profession. By those who will take the trouble of looking back to the numerous papers which this gentleman published on the nervous system, at the first promulgation of the discoveries in question, it will be found that he did much more, by his dissections in human as well as comparative anatomy—by his experiments and his writings—to advance our knowledge of this branch, than any of the persons, with one single exception, whose names it is usual to bring forward as meriting especial distinction. With regard to the roots of the spinal nerves, for example, Mr. John Shaw repeated the experiments which had originally been performed by Sir Charles Bell, confirmed their results, and exhibited them publicly to his class in Great Windmill-Street, two years at least before M. Magendie had thought of putting himself forward as an original experimenter on the nerves.

Mr. Shaw was likewise the author of a paper, which attracted much notice at the time, presenting, among other subjects, a full account of the experiments on the roots of the spinal nerves; and in which paper he anticipated the description of the same experiments, by M. Magendie, by several months. As this paper was delivered to the Medico-Chirurgical Society, some time elapsed after it was read before its publication; yet, notwithstanding this, it preceded the memoir of M. Magendie. It was entitled, "On Partial Paralysis," and was distinguished from M. Magendie's memoir by other and more important circumstances than merely that of being first before the public. It not only contained, as we have stated, an accurate account of the distinct properties belonging to the anterior and posterior roots of the spinal nerves, and a detailed description of the experiments which established these facts, but it embraced observations of equal interest upon numerous other nerves: for example, it contained proof of the fifth pair of the brain corresponding, in structure and functions, with the spinal nerves, while it showed the distinction between this class of double nerves and the portio dura, the ninth, &c. But Mr. Shaw did not limit himself to the illustration of the natural functions possessed by the nerves alluded to; the subject was, even at that time, so much advanced, that, as the title of the paper indicates, he could give pathological observations in addition, founded upon these new inquiries. These illustrations were of the highest importance. The nature of the questions discussed may be judged of by the title affixed to one of the divisions of the paper, which is this:—"Why should Sensation remain entire in a limb when all Voluntary power over the action of the muscles of the limbs is gone? or why should Muscular power remain when Feeling is gone?" We have only to remark, that the explanation which Mr. Shaw has given of these remarkable occurrences, is as full and satisfactory as any that could be presented at the present day, after sixteen years' acquaintance with the subject. Now when, at a subsequent period, M. Magendie came into the field, and related the same experiments on the spinal nerves as if they were original, he might not have been aware of Mr. Shaw's paper: but what principally astonishes us, is, that M. Magendie should have been adopted as an authority, when his paper evinced most decidedly that he was far behind in his knowledge of the subjects for which he was quoted. Although he presented his

experiments on the roots of the spinal nerves so late, he described them as quite isolated, having no connexion with, and receiving no confirmation from, any others. He does not once refer to the fifth pair as a corresponding nerve that might illustrate their functions, or to the portio dura and ninth pair that might be shown to differ from them. He does not pretend to explain paralysis of any kind from his experiments: indeed he refers to them as so recently performed, that this could not be expected; and so far is he from leading us to suppose that he had ever before succeeded in obtaining the same results, that he acknowledges that he had been baffled in his previous experiments. But there is the strongest reason, independently of all these arguments, for rejecting M. Magendie altogether as an authority upon the experiments in question. If those who quote him had perused his second paper, published only two months after the first, or any of his subsequent publications, they would have seen that he had completely changed his views respecting the functions of the roots of the spinal nerves, and expressed opinions diametrically opposed to those now generally adopted. In his second paper, M. Magendie maintained that neither of the two roots of the spinal nerves is exclusively for motion or sensation—that each of them is compound: that the anterior root, although principally for motion, is subservient also to sensation; and the posterior root, although principally for sensation, is subservient also to motion: that the same root, in short, may transmit an influence outwards to the muscles, to cause muscular contraction, and also convey a sensation inwards. Such are his most matured opinions. But it is to be remarked that, although they are his deliberate opinions, he has never made a single attempt to corroborate them by any experiments besides those on the spinal canal: he has never thought it worth his while to examine whether the same characters belong to the corresponding nerves of the brain or not. Things, indeed, have turned out so extremely favourable to this physiologist, that, as it were, in spite of himself, and by the most singular good fortune, he has enjoyed the reputation of entertaining opinions quite different from those set down in his books. This misrepresentation of his views, instead of inflicting injury, has contributed to magnify his fame: the misconception as to the real views which he advocates, has been a principal cause why so few authors (M. Müller, of Berlin, we believe, is the only one) have undertaken to controvert them, and show their utter groundlessness!

We may be allowed to give another instance, suggested also by reading the work before us, of an occasion in which Mr. Shaw ought to have been quoted in preference to any other writer, and his authority joined to that of Sir Charles Bell. The points of which we are now treating may perhaps be thought by some to be matters indifference; but how can medical men be encouraged to prosecute their profession scientifically, if they do not see that their just claims to celebrity will be protected?

When Sir Charles Bell announced in his first paper to the Royal Society, that the fifth pair was the only nerve of the encephalon that resembled the spinal nerves, he founded this opinion upon its being the sole nerve of the brain which had two roots, with a ganglion upon one of them, like those nerves. It was his chief object, in reference to this class of nerves, to prove that from their possessing two roots, of distinct anatomical appearance, they had two different properties — viz. sensation and motion; whilst the other nerves of the brain having only single roots, were endowed with one property alone. We may conjecture that the principal intention of his experiments upon the nerves of the face, was to establish this important position—that the fifth pair, which has a double root, gives both motion and sensation; while the portio dura, which has a single root, gives only motion. This distinction had necessarily to be drawn between these nerves, before any other conclusions could be arrived at regarding them. Now it so happened, that although he announced the fifth pair to be the nerve of sensation, and likewise of motion, to the muscles of mastication, the experiment which he performed to confirm this view of its double functions did not bear him out. It is obvious that he was misled by having a false notion as to the ultimate distribution of part of the motor root; for he affirmed that the infra-orbitary branch conferred motion upon the lips as they are concerned in mastication, but was not further a motor nerve. M. Magen-

die, while repeating these experiments upon the nerves of the face, was the first who exposed this error of putting forward the infra-orbitary branch as an example of a part of the fifth pair having the power of motion; and he shewed, on the contrary, that this particular branch had only one of the properties attributed to it by Sir Charles Bell—viz. that of sensation*. He thus destroyed the only experimental proof at that time given of the fifth pair possessing two functions, in virtue of its double root; and it is evident how extremely careless he was, and how little master of the subject, from his not being at all conscious of the serious blow that he had thus inflicted upon the principle which was the very foundation of all the new views on the nervous system. The most important thing at that period to establish or controvert, he might have known was, whether the spinal nerves and fifth pair acquired their distinct powers of motion and sensation in virtue of their double roots; and when he had proved that the only branch of the fifth offered by Sir Charles as an example of the compound nature of the fifth, was not a compound nerve, but a simple one only, was it not strange that he should have let the matter rest at this stage? But such is the fact; and nothing further did he attempt at any subsequent period, either with the view of confirming or invalidating his original statement. Had we relied, therefore, upon this gentleman for deciding what was the true nature of the fifth pair, we might have waited to the present day. He was content, at that time, with leaving it to be supposed that this nerve was for sensation alone, and had no power over the muscles of mastication.

Now it was Mr. John Shaw who rescued the subject from the state of error in which it might have remained, if it had been left to the superintendence of M. Magendie. He selected for experiment a division of the fifth pair, situated more deeply than those branches that had been previously experimented upon, and composed, without doubt, of the two conjoined roots. This was the inferior maxillary division of the fifth; and by performing his experiments upon it, he at once set the question at rest between M. Magendie and Sir Charles Bell. When he had succeeded in showing, on the living animal, that this was both a muscular and sensitive nerve, he conclusively proved that the latter gentleman had been correct in his general inference, and that it was a nerve of motion only to the muscles engaged in mastication, and to none others.

We have been led into this discussion by the perusal of the work before us; for here, we contend, was an important fundamental fact in the physiology of the nervous system, established experimentally by Mr. Shaw, when the truth was in imminent danger of being obscured by the experiments of M. Magendie; and for this service we owe both respect and gratitude to his memory.

The first part of Mr. Solly's volume relates to comparative anatomy, in which a succinct, but, as it appears to us, very clear and satisfactory, description is given of the nervous system in different classes of animals, illustrated by numerous engravings. The author then passes on to the human brain and its membranes, and afterwards to the dissection of the cerebrum and spinal cord. The fourth part is occupied by the nerves, and the fifth by the cerebral circulation. The development of the brain, its physiology and pathology, complete the essay; and the whole forms a volume highly creditable to the author and to the school which has the advantage of his services as a teacher.

* "Le resultat que nous avons obtenu s'accorde parfaitement avec celui que nous venons de rapporter, à l'exception toute fois de l'influence de la section de sous orbitaire sur la mastication, influence qui n'a pas été evidente pour moi."—*Journal de Physiologie*, 1821.

MEDICAL GAZETTE.

Saturday, October 15, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

AN HOMŒOPATHIC APOLOGIST.

EVEN as we expected, so has it come to pass. Quackery moves in an orbit well defined and palpable, nor does it require any great astronomer to determine its place at any given moment. The same beaten path has been traversed

for ages: yet, to the unreflecting portion of the community, the common course pursued is as much a mystery as it was to the first observers. Homœopathy, though following Morisonianism in quick succession, and in a very analogous career, will still, no doubt, dupe some people: nor will the similarity between the passive destructiveness of the one, and the manslaughtering tendency of the other, be speedily perceived. But dear-bought experience will most likely remove the veil at last.

We pointed out the benefits which even the death of Malibran would be sure to confer on the homœopaths: their mystery would be talked of, and at least their existence would obtain publicity. It was natural too, to suppose that their chiefs (if they had any such in this country) would stand forth in defence, and take up the cause with promptitude and vigour. We suspected, however, that the means of doing this were wanting; that their powers in the field of literature were, like their doses of medicine, infinitessimally small, and only likely to operate, if at all, through the effects of the imagination. Nor have we been deceived, or disappointed. The doughty champion who has stepped forward to advocate the principles of the old physician of Dessau, is the famous Dr. Uwins, who, though "striking too short at Greeks," has ventured to take homœopathy under his feeble protection.

There would be nothing offensive in this little display of zeal — for new converts are always celebrated for their activity—had the Doctor only shown some spirit of fair dealing in his proceedings; but in taking up the cause of Hahnemannism, and failing to get a hearing for his controversial denunciations, he fastens, with a despairing tenacity, on an individual whom he supposes, or affects to suppose, to be an assailant of his.

In a letter to the *Times*, Dr. Uwins undertakes to defend himself from what he conceives to be an attack on him in this journal; and he pretends to have discovered the author, whom he mentions by name—Dr. James Johnson. How blind do angry feelings make a man! We believe there is not an individual connected with the medical profession in this country, save Dr. Uwins himself, who would have made so silly a blunder. He has had, it appears, what he calls "battles of brains," with Dr. J. Johnson, at some of the medical societies; and having come off smarting, probably, or only second best, fancies he detects in every opponent of his newly-adopted system, his quondam antagonist. Hence, on finding homœopathy treated with a becoming severity in the Medical Gazette, his short-sighted spite leads him to imagine that the Editor of this journal can be no other than Dr. James Johnson!

But, after all, what does this amount to? How miserable and contemptible must the advocates of a (so-called) system be, who have none except poor Dr. Uwins to set in the fore-front of the battle; he, too, having no resource, save, in the absence of argument, to attempt personal invective!

His object, however, has, no doubt, been attained. He has had the opportunity, as we guessed that he or some of his brother Hahnemannians would be delighted to have, of advertising himself in connexion with the *new* doctrines. But so it has been with the Doctor on other occasions, and so, no doubt, it will be again. As it was the reflection that "allopathic carriages were in the market at a large discount," which operated so powerfully in inducing him to see what was in homœopathy, so we shall not be surprised, ere long, consistently with his usual choppings and changes, to find him in the ranks of the Hygeists—and then let the Lynches, and Morison himself, look to the supremacy. The Doctor is a facetious man, and can easily write upon any doctrine with that sort

of point which so finely finishes off his letter in the *Times;* "Dr. Hahnemann, against whom? Dr. Cullen—Hoffman—Gregory? No, against Dr. J. Johnson!! *Risus*, indeed." *Risum teneatis?* say we; and it is all we can find breath to say — for surely the Doctor will be the death of us!

MEDICAL EVIDENCE IN A CASE OF ALLEGED INFANTICIDE.

It is with some hesitation we make the following extract. But we shall abstain from comment, partly because it is scarcely necessary, as the inconsistency which we would expose must be sufficiently palpable to the reader, and partly because we do not wish to assume as correct a report which, in its present state, can reflect so little credit on the medical witness. W have already, on several occasions, endeavoured to point out the propriety o m d cal gentlemen, who give their testimony in public, taking care that the opinions attributed to them in the newspapers be correctly stated. If they cannot easily effect this, the professional journals are open to them to save them from injustice. In the present i stanc we th nk some explanation would be expedient, in order to reconcile, or to set right, the obvious absurdities and contradictions which have appeared in the most widely circulated, and, we should add, trustworthy, of our public vehicles of intelligence.

The *Times* of October 12th contains an account of a coroner's inquest, on the body of a new-born child, supposed to have been murdered. A verdict of "Wilful Murder" was returned against the father and mother. The medical evidence was as follows:—

Mr. Thomas Porter, surgeon, 145, Bishopsgate-Street, stated, that the mother said she heard the child cry. Witness examined the body, which presented the well-formed appearance of a full-grown child, and the chest was well filled. The lungs bore the *usual appearance* of having been distended with atmospheric air, which would not have been the case had the child not breathed. *There were no appearances to account for death. He could not say that it died of suffocation, nor that it had not.* The lips were slightly livid. He could not give a decided opinion of the cause of death. It might have died from *natural causes* before being put into the cesspool, as from not having proper assistance; but witness could not say whether death was the effect of natural causes or of violence.

By a Juror.—The child *might have been drowned* before being put into the cesspool.

Mr. Porter afterwards observed on the probability that the child *was suffocated as soon as born.*

ADVANTAGES OF SMALL HOSPITALS;

OR, CERTIFICATES *versus* KNOWLEDGE.

In controversial writing, nothing is more satisfactory than to find your opponent proving the accuracy of what you have advanced, even at the very moment he is attempting its refutation. Thus the Editor of the Lancet, working in his vocation, opens the flood-gates of his abuse against us, for representing the North London Hospital as a small one, and then, with the utmost *na veté*, he adds, "*the pupils will soon far exceed the number of those who can be adequately accommodated.*" Now this admission, coming from such a quarter, convinces us of what we had previously heard—namely, that between the smallness of the wards and the numbers who are crowded into them, many students can literally see nothing but the heads and shoulders of those before them.

Again: we reprobated the practice of taking a fee for attendance on both the medical and surgical practice together, on the ground that the pupil could not possibly give his mind to such a multiplicity of subjects. Here, too, our worthy contemporary steps forward in corroboration of our statements:—"*The amount* (says he) *of facts for observation and reflection, always within the walls of the hospital, must invariably be greater*

than the mind of any student can grasp and control." Rather a slip, that, eh! Master Wakley; and yet you are so much a friend to the "certificate system," (provided it be practised in Gower-street,) that you approve of and commend an arrangement which solemnly certifies to that having been done which you thus admit no student is capable of doing!!!

The fact is, that in his anxiety to fulfil the business of his vocation, there is no contradiction in terms—no misrepresentation (for an instance see next page), and no abandonment of his own professed principles, into which he is not betrayed. The object is to throw dust in the eyes of the public, and particularly of pupils and their friends, by putting forward the *cheapness* of the North London Hospital, to hide the *dearness* of University College. And we regret to add, that those connected with the School have not thought it beneath them to do the same. We challenge any one of them to tell us why else the advertisements which emanate from University College, *invariably announce the hospital fees, and as invariably suppress those of the medical school attached to it?*—We pause for a reply.

But while we have demonstrated in former numbers that the education, taking lectures and clinical practice together, is considerably more expensive than at most of the large hospitals, we deny that the "North London," by itself, is cheap—if the object be to learn. It is cheap only where the party limits his views to the price at which a certificate may be purchased, of having done that which the patron (we fear we may not add Saint) of the hospital informs us is beyond the grasp "of any student."

We call upon the College of Surgeons, and the Society of Apothecaries, to look to this: it is their bounden duty to refuse those certificates which include medical and surgical practice simultaneously; and this, too, at a time when the student is overwhelmed with lectures. Such an idea only requires to be brought before any intelligent person to be scouted; and yet this "certificate system" is practised in Gower-street, and approved by one who professes to be the enemy of every abuse!

But not only does our consistent Editor back up this disreputable proceeding; he goes farther, and argues in favour of small hospitals, as if they were actually superior to large ones! And how does the reader conjecture this is done? Why, by adducing the names of certain distinguished foreigners, who were physicians or surgeons of small hospitals. Thus, because Scarpa and Richter, after many years of labour in but a limited field of observation, attained important results; therefore they would not have made the same advancement if their means of investigation had been more extensive! Blockhead! he does not see that the minds of such men overcome the disadvantages under which they are placed; and that their genius shines forth, not *in consequence* of their hospitals being small, *but in spite of it.*

Besides, what parallelism is there between two or three instances of men becoming distinguished after many years of the most assiduous observation and study at hospitals of small size, and the education of young gentlemen who have but a short time to devote to clinical attendance, and for whom it is therefore of the greatest importance to witness disease in such varied forms as may render them familiar with its multifarious aspects, before they engage in the responsible duties of their profession. Who but a special pleader would compare things so utterly dissimilar?—who but a hack, driven on by the spur of his party, would plunge into such palpable and stupid contradictions?

As to the *honourable* member's abuse

of the MEDICAL GAZETTE, it is very natural; for, to say truth, we have been rather a sharp thorn in his side.

ANOTHER gross instance of that kind of literary fraud with which we have so often occasion to stigmatize our dishonest contemporary, occurs in the Lancet of this day (Oct. 15th.) In the GAZETTE of October 1, in reference to his puffing of the North London Hospital, and hatred of all others, we said—"the trick is perfectly well understood about town, and is only adapted to catch the novices who are very fresh and green from the country." Now Mr. Wakley separates this entirely from the context, alters the typography, and, wholly omitting its application as a caution against his own knavery, gives it as a general description of "the medical students of the present session" applied to them by the Medical Gazette. *This is false.* But we repeat, that his trickery and his motives are so well known here, that no student who had been even a few weeks in London would incur any risk of being taken in by them; and we believe we may add, that, thanks to this journal, there are now very few in any part of the country who are such "novices" as he evidently takes them to be.

THE LANCET'S PUFFING OF THE GOWER-STREET HOSPITAL.

To the Editor of the Medical Gazette.

SIR,

A LETTER, of which the under-written is a copy, was sent to the Editor of the Lancet two weeks ago, and has been left unnoticed by that very impartial journalist: perhaps you may think it and the inclosed worthy of a place in your GAZETTE; if so, you will greatly oblige, sir,

Your obedient servant,

GUYENSIS.

October 11, 1836.

To the Editor of the Lancet.

SIR,—In drawing up your Comparative Table of Fees for Medical and Surgical Hospital Practice, I am sorry to observe that you have departed from your usual candid and impartial manner of noticing the various hospitals and schools of medicine in this metropolis, and that instead of allowing the student, as heretofore, to exercise his own unbiassed opinion in the choice of a school in which to prosecute his studies, you have thrown a heavy weight into the scale in favour of the North London Hospital. You say that this hospital is the cheapest. Now, sir, the number of beds in the North London Hospital, is, or was, 120; and for these the pupil's fee, for twelve months' medical and surgical practice, is 21*l.* At Guy's Hospital, the medical and surgical beds amount to 540, and the surgical beds of St. Thomas's, which are also free to the Guy's students, to 300, making, in all, 870 beds; and for these the fee is 41*l.* 2*s.* A very simple rule will show which is the cheapest.

The manner, too, in which you have conferred the puff oblique on Mr. Liston, is by no means what we might expect from the Lancet; a work which has all along decried puffing in every shape. This gentle side-wind for Mr. Liston, and the more direct blast of the Toronto Licentiate, are from the same quarter of the compass—if not from the same point.

Yours,

GUYENSIS.

P.S.—I rely upon your candour for the insertion of these remarks.

September 27, 1836.

To the Editor of the Lancet.

SIR,

WHEN I found it necessary to conclude my last letter to you by remarking, that for its insertion I must rely upon your candour, I evidently hinted at the reception which I supposed you would give it, and anticipated your refusal to insert it. You have not disappointed me. There was a time when such a letter would have been thankfully received; and had I not known that the affected liberality of the Lancet had long ago given place to an open avowal of favoritism, I should have appealed neither to your candour or sincerity.

In this opinion I am by no means singular; your characteristic generosity is now pretty well understood; and when you had arrived at a certain degree of notoriety by moderate and plausible means,

you thought it would be advantageous to try the other side of the question. I need not tell you that you have been deceived: he who makes it the whole study of his life to deceive the world, will one day become cunning enough to deceive himself; and such is now your case. You began in deceit, and have finished in shame. You decried puffing, and have now become the veriest puff-maker that ever evaded the stamp duty. But was it necessary, in leaving your old friends, to take up with your old enemies? We know your desire for change; but why be-praise and be-laud those whom you have so strenuously condemned? Had your voice been less heard, you might have passed unnoticed; and had your pretensions to impartiality been less, your present turpitude would be overlooked.

Have you so soon forgotten that "the system of election in the institution in Gower street is in no respect different from that of the most rampantly corrupt medical monopoly in London?" *vide* Lancet, August 27, 1836; four weeks from which time you declare the same institution to be the best and cheapest in London. May I ask you what has now become of Stinkomalce? Has it become so buoyant from your inflation as to have risen into those clouds of ignorance which have ever hovered over it since it was built? Be careful, dear sir, in your puffing, or you will one day blow it away. I intend to dip here and there into your last two years' labour, and have no doubt that I shall find a few proofs, such as even you will find it difficult to answer or set aside. Mr. Liston and your other Scotch friends, —of whom, by the by, I wish you joy,— will inform you that facts—

> "Are sturdy chiels, that winna ding,
> An' dar'na be disputed."

GUYENSIS.

Oct. 11, 1836.

PROPOSED POOR-LAW MEDICAL CLUB AT CAMBERWELL.

To the Editor of the Medical Gazette.

SIR,

As you have given insertion to the anonymous and flowery communication of a "Camberwell Practitioner," you will, I am sure, allow me a brief space for reply in your next number. This champion of medical clubs has made a map of Camberwell to suit his own purpose, and, although he is such a stickler for parishes and districts, he has introduced into *his* list the names of two gentlemen (Messrs. Flower and Young) *who are residing in the parish of Lambeth.* This, I think, needs no comment. But, sir, will this "Camberwell Practitioner" *throw off the mask,* and enlighten us by his arguments in favour of the system? Can he show us how this innovation will benefit the poor man?—and can he also show that it will not tend to injure and degrade our profession? The most potent argument brought forward by one of the clubbists, at the meeting alluded to, was the following:—"If, gentlemen, you reject this proposal (he should have said mandate), the Poor-Law Commissioners will send young men from the hospitals to take charge of our poor." To what a state are we fallen!

I am, sir,
Yours respectfully,
E. CRISP.

Walworth, October 10, 1836.

[Should the "Camberwell Practitioner" reply to this or the following letter, or both, (as we think he is called upon to do) he must give his name.—ED. GAZ.]

CONDUCT OF THE SUPPORTERS OF THE PROPOSED POOR-LAW CLUB.

To the Editor of the Medical Gazette.

SIR,

PERMIT me, through the medium of your widely circulated journal, to request the "Camberwell Practitioner," who favoured us with an account, in your last number, of the proceedings at the late meeting held in the vestry hall of this parish, to have the goodness to forward his name. I certainly do not think it was exactly right that any remarks made upon the meeting, connected as it was with the interests of every surgeon in Camberwell, should have found a place in your journal, without the author's name. In my opinion, there has not been a more shameful motion started since surgery has been considered a profession. It is not sufficient that Forbes, Bean, Browne, and Flower, have the largest and most respectable practices in Camberwell, but they must concert measures for taking the very bread out of the mouths of the poorer class of surgeons? "After this, pray let us hear no more about the cant of *liberality* and *honour* of the profession," when the above-mentioned *gentlemen* have condescended to put their names to such an odious piece of business.

By inserting these remarks, you will greatly oblige

Your obedient humble servant,
T. BOWEN, Surgeon, &c.

Southampton-Street,
Camberwell.

PROJECTED POOR-LAW CLUB AT CAMBERWELL.

REPLY FROM MR. HULBERT.

To the Editor of the Medical Gazette.

SIR,

ENGAGEMENTS, and correspondence of a different nature, having so occupied my time as to induce me to delay addressing you until the present occasion, I shall now be more brief than was intended when your last week's number came under my observation; premising also, that I have neither time nor inclination to notice any similar remarks to those which have led to this communication.

Like your correspondent Mr. Crisp, "I feel reluctant" to enter into a controversy respecting the subject upon which we have recently respectively addressed you; but his assertion of being *compelled* to reply to the *misstatements* contained in my letter of the 22d ult. requires me not to pass over the same unnoticed.

How he has been *compelled* to make what every reader of your journal may consider a *voluntary* statement, I am at a loss to determine; unless it has been the result of his acting under the direction of those gentlemen to whose conduct I alluded, and whose opportune and spirited manner of "redeeming the honour of the profession" was assuredly very singular, and may be viewed (by them) as a superior method of supporting professional dignity to the wigs and gold-headed canes of by-gone days. This supposition is strengthened by his concluding paragraph, wherein the important information is given, that "the gentlemen who descended to personalities are prepared to justify themselves for so doing, and to prove the correctness of their statements."

Their method of justifying themselves I must leave to themselves; but their proving the correctness of every statement they made will, in my opinion, be difficult, as I am not without facts of sufficient force to subvert several of the statements made upon that occasion; but to bring them forward will be unnecessary, as the letter in your last number, from "A Camberwell Practitioner," (who is unknown to me) substantiates the correctness of the statement I gave you, and which Mr. Crisp's letter has by no means invalidated.

In conclusion, as Mr. Crisp has expressed a wish that I would "be personal enough to state names," I do assure you that I feel no reluctance in complying with his wish, and will therefore name the following:—Mr. Crisp, Mr. Boddy, Mr. E. Evans, Mr. Hooper, &c.

I consider it unnecessary to make any further comment; and should have spared myself and your readers this communication, but for the futile charge brought against me, as regards the misstatements contained in my former letter.

I am, Sir,
Yours very respectfully,
J. F. HULBERT.

6, Trinity Square, Southwark,
Oct. 13th, 183 .

NEW MEDICAL BOOKS.

The Human Brain; its Configuration, Structure, Development, and Physiology. By Samuel Solly. With 12 plates. 12mo. 12s. 6d.

Facts and Cases in Obstetric Medicine; with Observations on some of the most important Diseases incidental to Females. By J. T. Ingleby. 8vo. 9s.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Oct.* 11, 1836.

Abscess	2	Heart, diseased	3
Age and Debility	36	Hooping Cough	4
Apoplexy	7	Inflammation	26
Asthma	17	Bowels & Stomach	1
Cancer	1	Lungs and Pleura	1
Childbirth	5	Insanity	2
Consumption	74	Liver, diseased	9
Convulsions	33	Measles	11
Croup	2	Mortification	6
Dentition or Teething	1	Paralysis	8
Dropsy	26	Scrofula	2
Dropsy on the Brain	4	Small-pox	8
Dropsy on the Chest	1	Sore Throat and Quinsey	2
Epilepsy	1	Thrush	1
Erysipelas	1	Unknown Causes	12
Fever	3		
Fever, Scarlet	2	Casualties	6
Fever, Typhus	1		
Gout	1		

Increase of Burials, as compared with the preceding week . . 61

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Oct. 1836.	THERMOMETER.	BAROMETER.
Thursday . 6	from 36 to 57	29·82 to 29 58
Friday . . 7	51 60	29·42 29 37
Saturday . 8	52 58	29·35 29·35
Sunday . . 9	43 55	29·31 29·36
Monday . . 10	46 58	29·28 29·33
Tuesday . . 11	51 57	29·12 29·34
Wednesday 12	42 5	29·51 Stat.

Prevailing winds, W. by S., and S.W.

Except the 9th and 11th, generally cloudy, with frequent and heavy showers of rain; lightning in the East on the evening of the 9th.

CHARLES HENRY ADAMS.

ERRATA.

IN Mr. Bennett's paper on the otic ganglion, in our last volume, p. 690, *for* "males" *read* moles; *for* a "sinus connexion" *read* a direct connexion; and, *for* "Savant" *read* Savart.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 22, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture IV.

Further consideration of Age — Boyhood — Puberty—Manhood—Senescence, and Decrepitude. Legal distinctions, and physical and moral peculiarities of each period. Stature and proportion of the Body at Adult Age—Whether the Stature may be determined from the dimensions of a particular part.

Having treated in the last lecture of Infancy, or the first period of human life, we shall now proceed to the consideration of the other ages.

Boyhood.

Legal distinctions.—I have already noticed certain epochs belonging to the several periods of life, which are particularly recognized by the laws. The following may be added as specially relating to the age of boyhood or girlhood. An infant of *tender years* being prosecutrix in a trial for carnal knowledge, the whole of her testimony, recently given, seems admissible, because it is of the highest importance to ascertain the accuracy of her recollection. Under *eight*, or above *sixteen*, no infant is to be apprenticed to a chimney-sweeper; or if he be, no settlement is conferred. Before the age of *nine* no infant is to be bound as a parish apprentice; and children under *nine* years [3 and 4 Will. IV. c. 103] may not be employed in the factories, except it be in those for the manufacture of silk. The carnal knowledge of a female infant under *ten* years is a capital offence. To force or decoy away any child under *ten* from its parents, or guardians, with intent to deprive such parents, or guardians, or to steal any article about its person, is punishable by transportation, or imprisonment with hard labour: an exception, however, is made in favour of the father of an illegitimate child. Carnal knowledge of a female between *ten* and *twelve*, even with consent, is punishable with imprisonment and hard labour. Under *thirteen*, certain hours of work are prescribed in factories and mills—viz. not on an average more than eight hours a day (excepting in manufactories of silk, where ten hours are allowed). Between *thirteen* and *eighteen*, not more than twelve hours' work daily is permitted. Finally, unless great weakness of intellect appear, children are liable to punishment for crimes of commission *after* the age of *seven*; but by no means for a rape, or sexual crime, under *fourteen*.

It must be obvious that these regulations respecting age cannot but sometimes give occasion to inquiries, for the satisfaction of which the services of the medical jurist are necessary.

Physical characters.—The body during this period grows considerably: the limbs lengthen, compared with their previous condition; the voice is sharp, and of much the same volume in both sexes. There is a remarkable disposition for bodily exercise and motion. The milk teeth, or those of the first dentition, have fallen about the commencement of boyhood. The fourh molars make their appearance between the eighth and ninth year, and remian permanent. The incisors, canines, and first and second molars of the second dentition, issue from the gums between ten and eleven, in lieu of the milk teeth, which have disappeared.

Growth of the bones.—The olecranon presents an osseous germ between the *seventh* and *ninth* year. The scaphoid bone of the carpus becomes ossified at the same period, and the two osseous points at

the upper extremity of the humerus form a union. At *twelve*, the pisiform body of the carpus ossifies, and there is an osseous point detectable towards the inner margin of the trochlea of the humerus. At *nine*, the three primitive points of the os innominatum, which afterwards constitute the ilium, ischium, and pubis, are found in the lower part of the pelvis. The three bones of the innominatum may still be separated at *thirteen*, but soon after, they become firmly united: an osseous point is found in the lesser tuberosity of the head of the femur, and the neck of the latter bone is now ossified. The cartilages of the larynx are said to become osseous as early as the termination of boyhood,—first the cricoid and thyroid, and then the arytenoid structures: but these changes most usually occur at a much later date.

Puberty.

We now come to that period of life in which great and important changes are wrought in the system. About the age of fourteen in the male, and sometimes earlier in the female, the body begins to present a series of developments which are characteristic. The general growth is remarkable, but especially so that of the generative parts. Of the latter, I shall take occasion to speak more particularly, when treating of sex: at present I confine myself as much as possible to the general developments, physical and moral.

Legal distinctions. — But first let us observe, that there are certain distinctions made by law regarding this age, which merit the attention of the medical jurist. Puberty is, in law, supposed to exist at *fourteen* in males, and at *twelve* in females: which latter supposition seems to be borrowed from the Roman civil law, and to be founded on what is usually observable among females in the East; but it is certainly too early for the generality of the sex among us. Males after *fourteen* may marry, with consent (which is essential up to twenty-one), or by banns not prohibited. Both sexes, between the ages of *fourteen* and *twenty-one*, are liable to be punished for offences of commission, but not for those of omission, save where the liability is specially provided for. They cannot be sued on contracts, except for necessaries. The abduction of a female, under *sixteen*, without consent of parents, is a misdemeanor punishable with imprisonment.

I have already mentioned*, that at *seventeen* a male or female may become an executor: I shall now add, that he or she cannot *act* as such until the age of *twenty-one*; though, if an infant under *seventeen* be named executor jointly with an adult, he must in an action be joined as a co-plaintiff.

With regard to labour in the factories, under the provisions of the act already referred to [3 and 4 Will. IV. c. 103], no person under the age of *eighteen* is to work at night, or more than twelve hours during the day. There is still a severity in this enactment, as it leaves persons unprotected before they have attained the period of confirmed health and strength, an event which does not usually arrive until about the age of twenty-three.

Physical characters.—The physical changes which occur in both male and female between the fourteenth and twenty-first year, are very remarkable, and characteristic of that particular period of life. But they take place successively, and are diffused over the greater part of the interval. There may, in fact, be marked out an early, a middle, and a final, stage of puberty, during which, beside the development of the sexual apparatus, the following appearances are usually observable. In the male the chest becomes expanded, and the shoulders broader; the voice, hitherto feminine or girlish, first *cracks* (as it is commonly called), and then settles into a steady grave tone; the person begins to be furnished with hair on various parts; and the beard grows, first downy, and then gradually more firm and strong. In the female the breasts become enlarged, and various changes of the person connected with sexual development may be observed. The voice alters likewise, but not to such an extent as in the male. In both there is an enlargement of the capacity of the larynx; but the *rima glottidis*, which in the male increases in size in the proportion of 5 to 10, is augmented in the female only as 5 to 7. The muscular system usually receives large accessions.

But all these characters of the period between fourteen and twenty-one, must be noticed as having an especial relation to sexual development; for where this does not take place, owing to constitutional tardiness, castration, or other obstacles, the boyish character still prevails. Bernt, in his *Sammlung gerichtl. Medicin*, gives an account of a journeyman tailor, twenty-four years of age, who was still a mere boy, puberty having never operated its peculiar changes upon him. And other examples are of no rare occurrence.

Moral peculiarities.—But the effects on the mind are not less remarkable than those on the body. The habits of thought and action, through what Foderé calls "the tyranny of the generative organs," all undergo a change. The male, who differed as little hitherto in manner as in bodily con-

* Medical Gazette, p. 65 present volume.

formation from the female, now becomes more rough and masculine — the female more modest and feminine. It was the *individual*, in fact, who lived hitherto in both sexes; the *species* begins to be developed now.

At the risk of anticipating another part of the course, I am indueed to bring to your notice certain peculiarities affecting the female at this period of life, and having essential reference to Forensic medicine. The approach of puberty and menstruation is attended in some females with such a disturbance of the mental faculties, as to raise a question of criminal responsibility. "The crisis of the commencement of the menstrual function," says Foderé, "is sometimes retarded, and the interference which then occurs produces several alterations in the system—in the cerebral functions more particularly: for a sort of temporary dementia occasionally takes place, the existence, or the possibility of which, may, in certain circumstances, demand the attention of the medical jurist."

A remarkable instance of this kind occurred not long ago in Sussex. A girl, aged sixteen, set fire to her master's house. She had previously borne a good character, had stolen nothing, and, in short, committed the crime without apparent motive. She was brought to trial at the Lewes assizes. Her master was anxious to save her life; and a gentleman at Brighton, from motives of humanity, undertook her defence. It appeared that she had been a patient in the Chichester Infirmary in the course of the preceding year, when she was afflicted in succession with low fever, measles, scarlatina, and strong symptoms of phthisis. She had never menstruated: had always been of a reserved, taciturn disposition, and had conducted herself in an eccentric manner on several occasions. The counsel argued that under such circumstances, the act for which she was tried, was probably committed in a state of imbecility, or delusion, in which she could not be considered as a morally responsible being. To confirm this view, he called two medical men, Dr. King, of Brighton, and Mr. Pitt, a surgeon, to give their opinion as to the effects which illness, together with the non-appearance of the catamenia, might have on her mind; and whether insanity, under any form or degree, ever happened under such circumstances. The testimony of the medical witnesses was so strongly in favour of this presumption, that the judge and jury expressed themselves satisfied, and acquitted the girl.

Platner, in his *Quæstiones Medicinæ Forensis* (*De venia Ætatis*), gives a case in some respects so like this, that I cannot prevail on myself to pass it by unnoticed. A girl, only fourteen years of age, the daughter of poor parents, who were obliged to send her out to service to procure a livelihood, became remarkable for her ill-temper and obstinacy. She was ill-grown and feeble for her age, and conceived a mortal hatred for the task-work imposed upon her. One evening, after much sullenness, she hastily finished her supper, and set fire to her master's barn. She took lighted coals from the kitchen fire, and put them under the straw; but never attempted to make her escape or to conceal herself during the confusion that ensued. When the conflagration was suppressed, without being at all questioned on the subject, she volunteered to assert her innocence. But when taken before the magistrate, she fully confessed her guilt, alleging, as her only excuse, the severity of the labour she daily endured: though how this was to be lightened by setting fire to the barn, she neither could tell, nor could the magistrate understand. No malice could be imputed to the girl: her disposition was generally benevolent, and even her master and mistress could not but give a good character of her in other respects. A plea of insanity was thought of, but it was deemed impossible to render it valid, since no other overt act, or word, indicative of deranged intellect, could be adduced. Her defence was then rested on the fact, that though in point of age, as legally determined, she was within the verge of responsibility, yet as her physical development was retarded, and in reality she was still a child in respect to her moral nature, she could not be justly arraigned for what she had done. The Leipsic faculty were consulted on the case, and all the circumstances fully investigated. The signs of puberty were wanting, and there appeared to be no indication of the commencement of the catamenia. The memory was not deficient, nor was there any want of connexion in the girl's ideas; but there was a manifest absence of that judgment and steadiness of attention, without which there can be no choice as to what is to be desired and what shunned, nor any understanding, or power of observing, laws either natural or civil. A report to this effect was drawn up, and it seems to have procured an acquittal.

In another case, also related by Platner, (*De excusatione Ætatis,*) and which was almost identical with the preceding, a girl of *fourteen*, but of retarded growth for her age, was excused on that ground from the consequences of the crime of arson; but on a subsequent trial for a re-

petition of the offence, she was capitally condemned and punished.

Osseous system during puberty.—The bones undergo remarkable changes during this period. The coracoid process of the scapula, at *fifteen*, becomes united to that bone above the glenoid cavity, and several irregular osseous points may be observed at its summit. There is also an osseous point at the inferior angle of the scapula. Between *fifteen* and *sixteen*, the epiphysis of the olecranon forms a junction with the rest of the bone. At *sixteen*, the cartilage which binds round the os innominatum of the pelvis exhibits some bony deposits, and the epicondyle of the humerus ossifies. Between *sixteen* and *seventeen*, the five epiphyses of the *phalangettes* of the toes are united to the bones; and at *seventeen* the same occurs with respect to the posterior epiphyses of the *phalangines* of the same parts. At *eighteen*, the epitrochlea and the three epiphyses of the superior extremity of the femur, become conjoined with the bone; the toes also present still further development in their bony structure. About *nineteen*, there is observed an osseous germ at the sternal extremity of the clavicle: the fourth coccygean vertebra is ossified; and there is union of the inferior extremity of the femur, and the two extremities of the humerus with the body of their respective bones. At *twenty* or *twenty-one*, the first piece of the sternum is usually found united with the other portions of that bone. The sphenoid also is observed to be in close union with the occipital.

The fifth molar teeth—the *dentes sapientiæ*—commonly appear from the eighteenth to the twenty-fifth year. But there is much diversity in this respect, for some persons have them not till very late in life. Dr. Hamilton mentions a man who died at eighty cutting his wisdom teeth. One thing, however, is pretty usual with respect to these teeth, that as they are commonly the last to appear, so they are generally the first to decay.

Youth or Juvenility.

Let us now direct our attention to that period of life—youth, juvenility, or adult age—in which the system reaches its zenith; when both mental and bodily vigour attain a degree of perfection which the subsequent ages at best only serve to concentrate.

Legal distinctions. — After the age of *twenty-one*, and until that of sixty, males are liable to serve as jurors. In the church, no person is to be ordained deacon until he has attained the age of *twenty-three* complete; nor priest until he has completed *twenty four*. That males and females, on attaining the age of *twenty one*, are *sui juris*, at their own disposal, and in full possession of the rights and responsibilities of members of society, has already been mentioned.

Physical and moral indications.—Our best means of judging of the age of an individual at this period of life are far from being exact. Of the living we must form our estimate from the general appearance, and the expression of the features—making all allowance for labours undergone, climates visited, peculiar diet, trade or profession, &c. Beside this, Foderé thinks we have no good physical sign, save the stiffness of the beard; nor moral, except the superior steadiness and prudence exhibited in this period above that which went before. Of women it is perhaps more difficult still to form a correct opinion of the age, as at this period, owing to their peculiar destiny, they enjoy a remarkable immunity from those changes commonly attendant on the lapse of time. But in judging of the dead we may have recourse to the osseous system, which, as in the other ages, will present us with a few peculiarities that may assist us.

Osseous development.—About the *twenty-fifth* year the points which crown the transverse and spinous processes of the vertebræ become united; as, also, do the epiphysary points of the ribs. From *twenty five* to *thirty*, the first sacral vertebra forms a union with the rest. And this, perhaps, with the mere exception of the bony union which takes place between the ensiform cartilage and the sternum, and that between the coccyx and the sacrum (both which phenomena usually occur between the fortieth and fiftieth year), may be considered as the age in which the growth of the bones is complete.

As to the *teeth*, it has been sometimes thought that it might be possible, from a close observation of their wear and tear, to gather some clue to the exact age of the adult individual. But this method, so successfully pursued by veterinarians, and others conversant with the lower animals, cannot be applied to the human subject. The teeth vary very much in different individuals, and are of a very fragile and decaying nature in persons of weakly constitutions: all men, besides, do not employ their organs of mastication alike; some use them but little, *bolting* their food with impunity; others employ their incisors where the molars are commonly used, and *vice versâ*; others, again, owing to the unevenness of their jaws, one projecting beyond or beside the other, cannot use the corresponding parts of opposite teeth, and therefore wear them laterally; others, in fine, are in the habit of grinding their teeth in their sleep; so that,

on the whole, it must be evident that no certain characters can be detected in the condition of the teeth which can much serve the purpose of the medical jurist.

Proportions of the skeleton at different ages —Having noticed the successive changes that take place in the osseous system, from its commencement to its completion, we may here pause to take a survey of the proportions which the parts of the skeleton bear to each other at different ages. M. Sue, so long ago as the year 1755, made a series of interesting observations on this subject, and most of the continental writers have adopted his conclusions. His method was to measure the subject from the crown of the head to the sole of the foot; he then measured the trunk, from the crown to the symphysis pubis. In taking the length of the upper extremities, he measured from the prominence of the acromion to the end of the middle finger; and in measuring the lower, he took from the symphysis pubis to the sole. The following are some of his chief results, communicated to the Royal Academy of Sciences :—

Age.	Length of body.			Trunk.			Upper extrem.			Lower extrem.		
	Ft.	In.	Lin.	Ft.	In.	Lin.	Ft.	In.	Lin.	Ft.	In.	Lin.
Six weeks	0	0	16	0	0	7	0	0	5	0	0	4
Three months.....	0	3	0	0	2	1	0	1	1	0	0	11
Six months.....	0	9	0	0	5	8	0	3	7	0	3	4
Seven ditto.....	1	0	0	0	6	5½	0	5	10	0	5	9
Eight ditto.....	1	2	9½	0	8	3½	0	6	8	0	6	6
Nine ditto	1	6	0	0	10	0	0	8	0	0	8	0
One year.....	1	10	6	1	1	6	0	9	0	0	9	0
Three years.....	2	9	0	1	7	0	1	2	0	1	2	0
Ten ditto	3	8	6	2	0	0	1	7	0	1	8	6
Fourteen ditto	4	7	0	2	4	0	2	0	6	2	3	0
Twenty to twenty-five ..	5	4	0	2	8	0	2	6	0	2	8	0

After this the proportions do not vary, except it be in consequence of old age giving a curve to the spine. It will be observed, therefore, that when the osseous system has attained its full magnitude, the skeleton is exactly halved at the symphysis pubis; and putting this in connexion with the fact mentioned in last lecture, that the middle point of the whole length is, at birth, at the navel, and that at the sixth month of gestation it coincides with the lower extremity of the sternum, we become acquainted with the peculiarity, which, when once known, is easily retained in the memory, —namely, that the middle point of the length, during the period of growth, from the embryo state to adult age, traverses from above the abdominal extremity of the sternum down to the symphysis pubis, where it stops.

But it must be recollected that this is the condition of the *normal* development of the bony structures. Where physical causes have operated to interfere with the growth, the results are strikingly different. The trade, or occupation, in which an individual may have been engaged during early life, may be an impediment. One instance of this kind may be found in the labour of the factories, as it used to be exacted of young persons still growing. A remarkable example was mentioned in the evidence before the Parliamentary Committee, on the Factory question, in 1832. The witness, a medical man, showed how some of the operatives whom he had examined in the factories, must have lost, during their growth, a full foot of their entire stature,—and, as it would appear, through suppression of the growth of the lower limbs. He proved it in this way: it is known that when we extend our arms horizontally and laterally from the trunk, the distance between the tips of the fingers of each hand is equal to the whole length of the person. Now some of the factory workmen could with their extended arms reach over a space measuring *six* feet, while their stature did not exceed *five*. The deficiency he attributed to their standing constantly for fifteen hours or more in the day at work, during that period of life when the bony system is in a state of growth *. It is to be regretted that in this case the witness did not state the comparative lengths of the trunk and lower extremities. Still, however, the illustration is valuable, coming, as it did, from a quarter in which the researches of M. Sue appear to have been unknown.

* Medical Gazette, vol. xi. p. 597.

An unhealthy or *diseased* condition of the bones in early life may also materially affect the proportionate lengths, as found on measuring the adult skeleton. Rickets has this effect in a remarkable manner. In a curious paper on this subject by Mr. Alexander Shaw (MED. GAZ. vol. xvi.), the author says, "that the rickety skeleton has a nearer resemblance, in its relative proportions, to the skeleton of the child, than to that of the adult." And it is worth observing, that in these cases it is generally the bones of the lower limbs that suffer. "The pelvis and bones of the lower extremity," says Mr. Shaw, "fall short to the extent of about one-third of their natural dimensions; while the skull, the spinal column, and the upper extremity, only suffer a loss amounting to about one-thirteenth of their natural size."

In persons who are very tall, or who exceed considerably the ordinary height, it will generally be found that the length of the lower extremities, measured after M. Sue's method, exceeds considerably that of the trunk. In fact, there is here a deformity the reverse of that resulting from rickets, or from premature exertion in a standing posture. Mr. Shaw tells us, that he took the measurements of a gentleman who stood six feet four and a half inches, and compared them with those of another gentleman whose height was five feet eight: the result was, that in the part of the body above the pelvis there was scarcely an inch of difference between the two individuals; while in the part reaching from the spine of the ilium to the heel, there was a difference of no less than eight inches!

This will account for the unsatisfactory conclusions arrived at by those who have attempted to ascertain the human structure from detached parts of the system. In the case of animals, for obvious reasons—such as their comparative immunity from disease, their attitude not being erect, &c. — the dimension of any one bone may conduct us pretty correctly to those of the whole figure. But the statistical data gathered by Orfila and others with a view to arrive at the structure of man in a similar manner, afford no prospect of medico-legal utility. We find in the *Traité des Exhumations juridiques*, by Orfila and Lesueur, two tables — one giving the measurements of fifty-five recent subjects, including those of the femur, tibia, fibula, humerus, cubitus, and radius; the other stating the lengths of the same parts in twenty skeletons. But when we come to inquire what is the stature corresponding to a particular bone, we find that we may be left in doubt whether the person to whom it belonged was only five feet four, or five feet nine or ten in height!

M. Devergie shows the fallacy of the method by drawing up a table, of which this is a copy. He takes the tibia as the bone from which we may be desirous of drawing an inference, stating its length at 37 centimètres (14·54 in. Eng.), as he finds that to be set down as the length of the tibia in about 12 of the 51 subjects.

Tibia.	Femur.	Lower Extremities.	Upper Extremities.	Trunk.	Stature.
cents.	cents.	cents.	cents.	cents.	mètr. cents.
37	44	85	75	85	1 70
37	46	87	78	86	1 73
37	46	87	78	86	1 73
37	46	85	72	84	1 69
37	45	84	76	80	1 64
37	45	81	75	85	1 66
37	45	83	75	86	1 69
37	45	84	77	86	1 70
37	44	85	75	85	1 70
37	45	88	78	89	1 77

On inspection of the last column we perceive that the stature may be either 1 mèt. 64 cents. (5 feet 4½ inches English) or 1 mèt. 77 cents. (5 feet 9½ inches English) giving a difference of *five* inches between the extremes. Yet M. Orfila, contemplating his tables with some complacency, says that he is convinced of the possibility in the greater number of instances, of arriving at the truth, if we avail ourselves of his results, especially if we take the *femur* or the *humerus* as our standard. On consulting his tables, however, with reference to these bones, thinking it possible that M. Devergie's instance of the tibia might be partial, we find the facts to stand thus:—

Femur.	Stature.	Humerus.	Stature.
45	1·68	32	1·73
45	1·69	32	1·68
45	1·70	32	1·73
45	1·64	32	1·68
45	1·67	32	1·70
45	1·66	32	1·69
45	1·69	32	1·70
45	1·70	32	1·66
45	1·68	32	1·68
45	1·70	32	1·69
45	1·77	32	1·80
45	1·75	32	1·64

So that we should be still more unfortunate with these parts than with the tibia, being left in doubt respecting the stature corresponding to the humerus to the extent of above *six and a half* inches, and with regard to the femur, *five*.

Manhood.

Physical appearances.—Although the period of manhood is not characterized by any of those well-marked and positive signs which it would be peculiarly the province of the medical jurist to determine, still there are appearances sufficiently indicative of the time of life. This is the period when, if ever, the system attains its perennity: it is mature, and preserves its high condition for several years. Sometimes the person grows more stout, and of fuller habit. The features are more deeply set, and the forehead bears traces of care. Women, especially those who are mothers, exhibit much the same permanence of general appearance, and undergo little or no change until the cessation of child-bearing. Upon the occurrence of this epoch, which commonly dates about the forty-fifth or fiftieth year in this country, it frequently happens that the mental powers become developed to a high degree of perfection. Of the moral qualities, however, of either sex, it is unnecessary for me to speak, as they are too various and diversified for the purposes of the medical jurist.

Height and proportion in mature manhood.—The first portion of this period of life—from the age of thirty-five to forty—may be considered as that in which the body is in its full vigour and prime proportion. Here is a table of the heights of the men of a Scotch militia regiment, with a statement of the average circumference of the chest corresponding to each grade of stature.

Strength.	Stature.	Number of men.	Mean circumference of Chest.
	ft. in. ft. in.		inch.
	5 4 and 5 5	79	38·7
	5 6 .. 5 7	221	39·2
686	5 8 .. 5 9	245	40·5
	5 10 .. 5 11	107	41·1
	6 0 .. 6 1	34	42·4

From this statement we may draw the curious inference, that for every two inches of height the measurement round the chest increases one inch. If the men, who were six feet one inch high, had been as large in proportion to their height, as the men who were five feet five, they would have measured 43·4 inches round the chest, instead of 42·4. Mr. Marshall, to whom we are indebted for this observation, gives several others of a similar kind in his book on the Enlisting, Discharging, and Pensioning of Soldiers. I may add to the statement in the table, relative to the average thickness round the chest, that the extremes of the measurement of all the Scotch regiments of local militia were as follows:—Three men were only *thirty-three* inches, and nineteen thirty-four; three were forty-seven, and one man *forty-eight*, inches round the chest.

Senescence.

Physical characters.—Our means of judging the age in this period of life are far from exact. Some, who are actually between fifty and sixty, are as hale and vigorous, and have as few marks of the imprint of time upon them, as many who are not yet forty; while, on the other hand, as Byron has said,—

> ——————— "There is an order
> Of mortals on the earth, who do become
> Old in their youth, and die ere middle age,
> Without the violence of warlike death;
> Some perishing of pleasure—some of study—
> Some worn with toil—some of mere weariness—
> Some of disease—and some insanity—
> And some of withered, or of broken hearts."

The skin and lineaments of the visage betray manifest signs of advancing age. The person generally becomes meagre, and loses its erect aspect: not unfrequently, however, a high degree of *embonpoint*, or rather obesity, prevails. A diminution of vigour and activity is more or less observable. As to greyness of the hair, baldness, wrinkles, sunken eyes, and decayed teeth and jaws—observations

founded on such characteristics as these, unless several of them be taken in combination, can scarcely avail for medico-legal purposes.

Decrepitude.

The period of decrepitude—"last scene of all, that ends this strange eventful history—second childishness, and mere oblivion,—sans teeth, sans eyes, sans taste, sans everything," — that age which is usually described as commencing about the eighty first or eighty-fourth year,—I cannot help observing that it appears to be considerably antedated. We can scarcely call to mind the advanced ages of Goethe, Bentham, and some others, who have recently died, possessing to the last the highest vigour of intellect; nor can we reflect on the many distinguished persons still living, who have passed far beyond the "threescore and ten," and even the "fourscore," allotted to the more strong among the sons of men, without being impressed with the idea that there must be some real improvement in the habits of life in latter times, which preserves the stamina, and keeps the "mens sana in corpore sano," up to an age described by our predecessors as the mere wreck of human nature.

Physical characters.—The state of the osseous system is at this time characteristic. The bones of the head are very solidly united, but they are thinner than in earlier life. The lower jaw has the appearance of great wear and tear, the teeth have in general all disappeared, and the alveolar processes are wanting. But, with all their solidity, the bones are very deficient in gelatinous or animal matter; whence they are more friable and dry. The spinal column is usually more or less curved. The larynx is completely ossified, and so are the cartilages of the ribs. These signs, however, of very advanced age, are applicable to a period embracing many years of life—the interval is large in which they are observable: so that we are obliged to gather more exact information, if it is to be had, from moral or collateral circumstances.

I shall here close my remarks on age. A multitude of other considerations, which have sometimes been looked upon as connected with the subject, might easily have been introduced, and probably would have served both to amuse and instruct you: but I have thought it right to omit all such as do not immediately belong to our province; and most of those to which I allude have certainly more relation to natural history, or to medical police, than to Forensic medicine.

MEDICAL PROBLEMS.

By D. Griffin, M.D.

HOW ARE WE TO DISTINGUISH SYMPTOMATIC FROM IDIOPATHIC INTERMITTENT?

In the month of March some years since, when intermittent fever was very prevalent in the country, James M'Namara, a healthy young man, 21 years of age, was attacked with fits of shivering, accompanied by pain in the left side of his head; these fits were succeeded by heat of skin and quickness of pulse, of some hours' continuance, and ended in profuse perspirations. At first the paroxysms came on rather irregularly, but afterwards they occurred on every second day, for the most part at the same hour, and with increasing severity. When I was called to see him, he had been suffering in this way about eight days; the paroxysm had just then gone off, and left him in a low, weak state, with slow feeble pulse, and some headache, which was worst at the left side, but was no where very severe. Tongue whitish; face pale, and covered with a clammy sweat; the bowels had been tolerably free all through, and he had scarce any thirst except during the fit. I ordered him a drachm of the compound powder of jalap immediately, and a tea-spoonful of Peruvian bark three times a day. On the 25th the fits of shivering were repeated once or twice; but the bark being continued, they went off, and did not return for some days. On their recurrence I was again called to see him; the fits of shivering were much more irregular than before. For the last four or five days he had pain in the vertex, and that which he had in the left side of the head was very severe about the left mastoid process and ear. He could get no sleep, and suffered much during the last two or three nights; but there was no tendency to delirium. His pulse was 95, and hard; his tongue whitish; and there was very little thirst. His face looked pale, was covered with a clammy sweat, and had an expression of great anxiety. There was a tumor over the mastoid process at the left side, which was soft, puffy, and fluctuating, on opening which, a quantity of extremely

fœtid brownish pus sprang out with great violence, and much relief. The bone was carious to the extent of about a shilling.

As this patient lived at a considerable distance from me, I found it impossible to see him every day, or, indeed, at all as often as might be wished. After the opening of the tumor he got a purgative, and had relief from the paroxysms for a day or two; but they came on again with more than usual severity, and occurred daily instead of every alternate day; they were also much more regular than before, the cold fit commencing exactly at noon, lasting about half an hour, preceded by a hot stage of somewhat longer duration, and terminating in profuse perspiration. I saw him in one of the intermissions: the pain in the head was trifling, and there was no thirst nor heat of skin; the face was pale, the tongue slightly white, the bowels free, and the pulse calm, at about 75.

As these paroxysms bore a perfect resemblance to regular intermittent fever, of which there had been for some months a good deal in the country—as the intermissions were so perfect, the pain so trifling, and above all, as it had before yielded to the influence of bark, I was not at all convinced that the symptoms depended upon suppuration within the head. I had never seen the shiverings attendant on internal suppuration so perfectly periodical; and there was no improbability in the coexistence of such an abscess as I described with idiopathic ague. I determined, therefore, on trying the bark again: the subsequent history of the case proved, that though it once more gave very unaccountable relief, it was a remedy entirely inapplicable, and convinced me of the great necessity there is for minute inquiry in cases so very insidious as these are.

The discharge from the wound, which had been a good deal for some days, began to diminish considerably; the fits also disappeared, the intermission lasting from the 3d to the 6th of April. He was then attacked with pain in the head, very severe in the vertex and mastoid process, and attended with violent shivering fits frequently in the day; great thirst, heat of skin, vomiting, and delirium; no drink remained on his stomach. His face was flushed, his pulse hard, at 110, and he was very restless. The pupils of the eyes were not dilated, but he lost his sight in the night for about ten minutes. The case was at this period evidently hopeless, unless something further was done. I had brought no instruments for trephining with me, and the place was many miles from my residence; but at all events the necessity for it did not seem very apparent, as the matter was flowing with sufficient freedom from the opening near the mastoid process. The only other obvious indication was to diminish the inflammatory action; and with this view I took twenty-six or twenty-eight ounces of blood from the arm: the vomiting ceased soon afterwards, and he seemed somewhat relieved. It was then late at night; and on my return next morning, I found he had expired about three o'clock. There was no examination of the body: an application for that purpose is seldom successful with people of this class in the country, and was not in this instance made, as I knew it would be useless.

Some time afterwards a boy, 10 years of age, was brought to me by his mother. He appeared very ill, and the resemblance the attack bore to that just related was very remarkable. She said he was seized at first with pain in the head, accompanied by frequent irregular fits of shivering. In about a week from their commencement these assumed a more regular character, occurring precisely every second day, and followed by a hot and sweating stage, as in the case of intermittent fever. He had been affected in this way about a fortnight: when I saw him his pulse was 95, and weak, his tongue whitish, his face pale, anxious, and covered with a cold perspiration. The skin was cool, but he had much thirst, and was very feeble; his bowels were rather confined, and he had lost his appetite. Again looking on it as a case of ague, I ordered him half a drachm of pulv. jalap. comp., and some pills of sulphate of quinine, three times a day.

The mother returned to me in four or five days to say that he was much better, the fits had gone off, and his strength was improving; the thirst and debility were much less, and he was altogether so much better, that she thought he only wanted something to restore his strength. A repetition of the medicine was accordingly ordered. In about a week from this time she came again, to inform me that he had got a return of the shivering fits; that they

now came on every day, sometimes two or three times; that he had been twice growing gradually worse since their recurrence, and was at last very bad; she said that he had great oppression, with delirium, much restlessness, and excessive thirst; that he had been delirious the whole of the previous evening, and all night, and that he had refused drink since morning. The oppression was hourly increasing, but he was still able to speak when she left him; she also mentioned that he had complained much more than usual of his head the last four or five days, and that there was a tumor behind his left ear; she now also, for the first time, told me that he had been long subject to an occasional suppuration in his left ear. I went home with her to see him, but he had just expired as I entered the house. On looking at the body it appeared to be much wasted. The tumor was situated exactly above the mastoid process, as in the other case, and was soft and fluctuating. I was anxious to examine the head, but knew it would be quite useless to make application for leave to do so. There cannot, however, I think, be a doubt that there was matter under the skull, and that it had made its way through, as in the former case.

I shall give one instance more of this formidable affection, which, though not attended by ague, nor by any external appearance of abscess, proved on a post-mortem examination to have been exactly of the same nature.

Mary Cronon, a married woman, aged 24 years, applied at the Dispensary, complaining of a pain in her ear. The case was looked upon as one of common cold, and did not attract any particular attention at the time. The sunk and distressed expression of her countenance alone a little surprised me; but I attributed it to her having been deprived of sleep for two or three nights. Some days after her husband called on me, to say that she had no relief from the violent pain, but was much worse, and unable to leave her bed. On calling at the house I found her in a most deplorable state. The pain had extended from the ear to the back of the head; the countenance was heavy and stupid; the pupils greatly dilated; the skin warm, and covered with clammy perspirations; the tongue white; the pulse small and very feeble, at 110; and there were constant retching and distressing thirst. On pressing the right hypochondrium she complained of pain. I had now no doubt of the nature of the case, but it appeared to have passed the period at which bleeding could be of any avail. The head was shaved; cold lotions were applied to the fore part, and the whole occiput was blistered; active purgatives were also ordered. She grew more listless and heavy on the following day, and was in some degree deaf, but was sensible; and when spoken to in a loud voice, answered questions distinctly. The skin was cold, and covered with clammy moisture; she complained of the intensity of the pain in the head, and, for the first time, in the back of the neck; she took drink well, but the retching continued at intervals. In the evening she roused herself up, apparently excited by a strong presentiment of her approaching dissolution; called her friends about her; said she felt she could never recover, and in a very affecting manner recommended her little child to the care of her mother and husband. As if she had then accomplished all that she could have any concern for in life, she sunk back into the same listless state as before, equally indifferent to the cries of her infant or the complaints of her family; she moved on the pillow with caution, complaining dreadfully of the back of the neck, and now and then sawing the air to and fro with her hands: she suffered intensely whenever her head was raised to give her drink, and at night had involuntary evacuations. I saw her, for the last time alive, on the following morning; she was lying on her side, frothing at the mouth, with a cold, clammy skin, ghastly expression of countenance, the lips pallid, and the eyes filmy; her pulse still distinct, at 95; she spoke rationally, and complained of the pain in the neck when questioned. Anxious to ascertain whether she could swallow, I had her raised to give her some drink, to which, however, she strenuously objected, exclaiming, "'twill choke me, 'twill choke me!" She was, however, induced to make the attempt, and had such difficulty that it was near suffocating her; her head was laid back on the pillow, and she expired in about half an hour.

The examination was made three days after death. There was unusual difficulty in detaching the cranium, from the close adhesion of the dura mater; the pia mater was not particularly vascular; there were about two ounces and

a half of water in the lateral ventricles; the choroid plexus and velum interpositum were unusually pale; the pineal gland was very soft, and contained none of those gritty particles commonly met with. On raising the tentorium, the cerebellum was found covered by a layer of thick pus, which extended over the upper surface as far forward as the cavernous sinus, into which it had passed through the aperture in the dura mater which transmits the fifth pair of nerves; it had also insinuated itself into the meatus auditorius internus. The pia mater and arachnoid membrane investing the cerebellum were highly vascular, and spots of extravasated blood were observable; this was also the case at the base of the cerebellum and the commencement of the medulla oblongata, though no matter was found there. The quantity of matter on the whole amounted to something more than an ounce. The substance of the brain and cerebellum differed little from the natural state; no other morbid appearances were found except in the liver, which was considerably puffed out below the ribs, with a round thickened margin; it was of a bluish colour, and its substance was of a soft spongy texture. She had never complained of her side until after she was attacked with pain in the ear.

The cases of this description recorded in medical writings are very numerous, and many of them have been found to resemble intermittent fever so strongly, that their real nature was entirely unsuspected until the progress of the disorder disclosed it, though generally at a period too late for relief; it is, therefore, a matter of the utmost consequence to be able to distinguish them in the early stage of their attack, the only time we can hope to find our efforts available. Unfortunately, however, in diseases such as these, which are not always very rapid in their progress nor constantly acute in their course, it seldom happens that we are consulted early enough to have it in our power to prevent the occurrence of suppuration, and as the only rational practice, if the symptoms indicate that it has occurred, would be to trephine as soon as we can ascertain the seat of the matter, it would be a vast advantage to be able to tell when this has happened. We are much in want of facts on this subject, and it would require considerable experience in cases of this kind *to be able to determine what connexion the rigors, or intermitting paroxysms, have with the actual existence of suppuration.* In the present state of our knowledge, however, their occurrence is the first circumstance that usually leads us to suspect that it has occurred, but we see that in their close imitation of a much less serious malady, they are, in some instances, likely to deceive us. The pain in the head in itself, except when fixed to one spot, cannot give any particular indication, as in common colds, in disordered stomach, and in the paroxysms of all intermittents, it is very severe. It is probable that more may be gathered from observing the changes of countenance closely, than from any other symptom whatsoever. It will, I believe, almost always be found, that even where the intermission is complete in other respects, the countenance bears evident signs that the patient is labouring under a serious and dangerous disease. In the advance of the disorder it becomes still more indicative of the deadly mischief which is going on within; the face and forehead are covered with a cold and clammy sweat; the features are sunk and ghastly, and there is on them an expression of extreme distress and suffering. These signs are not altogether peculiar to the cases before us, but, I think, may be observed in all instances, whether chronic or acute, in which matter is forming beneath the skull. I should, perhaps, except some of those in which this state of things has arisen from external injury, as I think I have seen some in which this expression was not strongly marked, or was altogether wanting. It seems probable that in the instances given the inflammation was neither violent nor extensive in its first attack, but that it was confined to a small spot which suppurated after the inflammation had lasted some days, and, by pouring out matter, separated the dura mater in its immediate neighbourhood; this in its turn becoming inflamed, added to the quantity of confined matter and to the severity of the symptoms, and, at length, from the continuance of this process, and the impossibility of the matter finding an outlet, the inflammation became very extensive and intense, adding every hour to the urgency of the symptoms and the certainty of the event. This view of the circumstances seems to be supported by the fact well known to medical men, that diseases so serious and dangerous as these, very

often have their origin in the simple and apparently trifling fact of a child having a purulent ear, and leads us to perceive, in the strongest manner, the great difference there is with regard to the event, between the brain, when any part of it or its membranes is in a state of suppuration, and other parts of the body. The bony covering which is placed round it, to protect it from injury, is, when suppuration occurs in the brain, the main cause of destruction. In any other organ of the body, even in many of those which are concerned in the most important vital processes, large abscesses frequently are formed, and many of the persons affected with them escape, and even enjoy perfect health afterwards; but in the brain, the smallest abscess occurring, even so small a one as sometimes in slight cases of whitlow separates the nail from the finger, is obviously attended with the utmost danger to life, and must necessarily prove fatal except in the small number of those cases which come within the reach of surgical aid, and the still smaller number in which the matter is absorbed.

Hence it should be a constant rule of practice in the treatment of diseases of the brain, *never to admit even a hazard of inflammation, however slight or circumscribed, terminating by suppuration.* In other organs, if it occur, there is still some hope left; in the brain there is virtually none *.

[To be continued.]

ON LITHOTRIPSY,

AS PRACTISED BY THE LATE PHILIP FERNANDEZ, ESQ.

(*From a Correspondent.*)

In recording the death of this estimable young surgeon, which occurred on the 18th of September, 1836, we take the opportunity of laying before the medical public an account of an improvement which he had effected in the practice of lithotrity.

The attention of Mr. Fernandez had been directed to lithotrity by one of those apparently casual circumstances which so often form an æra in life. An operation requiring much self-possession and very careful dissection, which he had performed with great dexterity, having been mentioned to Sir Benjamin Brodie, the friend and ready patron of every pupil of rising merit, he offered to present him with a crushing instrument, should he be inclined to practise lithotrity. The offer was accepted, and Mr. Fernandez, with that unwearied zeal which formed so bright a part of his professional as well as private character, took every opportunity which the dead-house of a considerable parish infirmary afforded of practising the operation.

By repeated experiments he worked out the principle which enabled him to seize the smallest portion of stone in the bladder of the living body, twenty-eight times out of thirty, in the shortest space of time possible.

In his first operation, he seized and crushed the stone in $2\frac{1}{2}$ minutes. He lost time, indeed, by following the recommendation of a friend, and endeavouring to grasp the stone between the blades of his instrument; for he found that at each attempt it escaped. He came, therefore, to the conclusion, that, in this method, success would depend upon accident; nay, more, that the attempt to grasp the stone pushed it away from the operator.

The failure of what would seem, at first sight, to have been the obvious and natural method of seizing the calculus, confirmed the truth of the theory of the operation, which frequent meditation and practice on the dead body had led him to entertain, and at which he had arrived by what deserves to be called a surgical analysis; whence he had educed the simple and beautiful principle on which his future success depended.

He saw that when the bladder was injected the surface would no longer be rugous, but smooth, and that the stone would consequently be sure to roll to the lowest spot. He made it a rule in his operations, therefore, to come exceedingly close to the stone (whether before or behind, mattered not) without touching it; and then, having first opened his instrument, he gently pressed the part. The spot touched being thus made the lowest part of the bladder, the stone uniformly rolled into the instrument, and he had nothing to do but to close it and crush the calculus.

Twenty-eight times out of thirty did this method succeed, as we have already stated, and the stone was seized in half a minute, to the no small surprise of the by-standers; and thus, in our opinion, has Mr. Fernandez removed the grand difficulty of this operation.

* Dublin Journal of Medical Science.

It should, however, be remembered, that an instrument powerful enough to crush a mulberry calculus is still a desideratum in surgery.

Fortunate, indeed, it is for the world, when an operator can thus explain the grounds of his success, so that those results which at first seemed the exclusive reward of individual tact, may become the heritage of mankind.

Nor does this hope that lithotrity has now been deprived of its chief difficulty, rest solely on the probability of the theory and the success of its promulgator; for the same effects have followed in other hands.

By this method, Mr. Robert Bloxam, of Ryde, cleared the bladder of a stone in two sittings, with the same facility as Mr. Fernandez; and another operation, left unfinished by the deceased, was easily completed by Mr. H. W. Rumsey, of Chesham.

Thus, then, were these two gentlemen enabled to lithotritize with all the skill of adepts, without any previous opportunities of practice, simply by following the instructions of the lamented subject of this notice.

May we not, then, claim for Mr. Fernandez, too early snatched away from the affections of his friends, a portion of that praise which is awarded to those who, by adding to the stores of chirurgical knowledge, have diminished the sufferings of mankind?

His second operation was rendered more complicated by the extreme smallness of the orifice of the urethra, which required division, the intervention of spasm and hæmorrhage; yet, even with these difficulties to contend against, the first sitting was completed in five minutes.

Let us now detail a few other points relating to this operation, which were the subjects of his investigation.

1st. Concerning sounding. Mr. Fernandez conceived that it was possible to draw an imaginary line from some given point, varying with the position of the patient, so as to intersect the fundus of the bladder, and consequently lead to the stone itself. By availing himself of this, he became so dexterous that it has happened in a few instances, where sounding was really difficult, that he instantly succeeded in striking the stone. Guided by this imaginary line, he found on one occasion, in his early practice, the stone lodging in the curvature of the instrument.

He explained this circumstance in accordance with the theory which we have previously given, by supposing that by his having pressed a little in front of the stone, he had lowered that spot sufficiently to cause it to roll into the hollow of the sound.

He thought, too, that in cases where the presence of stone was suspected, the surgeon might do better than striking the parietes of the bladder at random: he preferred sweeping its cavity transversely, and forward, and backward; and this he was in the habit of doing, whether he used a flexible or stiff instrument.

When this method had failed, he was too cautious to feel perfectly satisfied of the non-existence of a calculus, if the symptoms were prominent, till he had placed the patient on a lithotritic bed and sounded again, in the injected bladder. He thought that if a calculus existed, it must then necessarily be detected. As the most eminent surgeons have sometimes overlooked the existence of a stone, this hint is submitted to their consideration.

It was the intention of Mr. Fernandez to have injected bladders of various sizes and shapes—to have made casts from them, and to have embellished his projected work on Lithotrity with drawings from these casts.

The utility of such delineations to the young operator cannot be doubted, as they would have shown what position the stone is likely to take up, according to the irregularity of the cavity in which it is lodged.

Whether the deceased's method of sounding may turn out so satisfactory to others as it was to himself, and the actual cause of his dexterity, or whether the more perfect method of sounding in an injected bladder, in suspected cases of stone, as he recommended, may render the decision of the question of its existence more perfect, remains to be confirmed by others. His method of lithotritizing stands on an immoveable basis; and the adaptation of the simple truth of a stone's necessarily falling, in an injected bladder, to the fundus, to the important purpose of seizing it with facility in the manner described, must be considered as the effort of a mind of the same quality as that which forms the distinguishing feature of our greatest discoverers.

MEDICAL EVIDENCE IN A RECENT CASE OF SUSPECTED INFANTICIDE.

LETTER FROM MR. PORTER.

To the Editor of the Medical Gazette.

SIR,

I FEEL highly obliged by your courtesy in calling my attention to a report which appeared in the *Times* newspaper of the 12th instant, and which professes to give a detail of the evidence taken at a coroner's inquest, held at Bishopsgate Workhouse on the 11th instant. As I do not generally read the *Times*, I was not aware of the insertion, and, in all probability, would never have been made acquainted with it, had you not drawn my attention to it. That it is a correct report, I think no liberal person would for a moment suppose;—what with omitting words necessary to the proper reading of a sentence, and substituting others, the evidence is, in many parts, any thing but what it ought to have been; and, to convince yourself and your readers to what extent a report of this kind may be varied by the reporter, I beg to recommend a perusal of a report which appeared in the *Morning Chronicle* of the same date.

I feel the full force of your observations respecting the propriety of medical practitioners taking care that the opinions attributed to them in the newspapers be correctly stated; but, sir, with due deference to your opinion, I fancy this, in most instances, would prove no easy matter, and I think that those gentlemen who are in the habit of being called upon to attend coroners' inquests will bear me out in this assertion. Evidence is put into their mouths which they do not always utter; questions are so shaped with regard to probabilities, and are often so edged by collateral circumstances, that whilst you are directing your attention and framing your answer to meet one part, a reporter places what you have said to a different account. With respect to the report in question, I could have wished, since the case must go before another tribunal, that it had not been necessary for me to go into it at this time; but as it has been allowed to go forth in an imperfect and very incorrect state, I think I am justified in endeavouring to counteract its effects, and which can only be done by giving a just one.

To the best of my recollection, my evidence was as follows:—I yesterday, between one and two o'clock, received an order to attend F. Douglass, at 2, Sweet-Apple Court. I found her in bed, and, upon examination, I ascertained that she had been recently delivered. I inquired what had become of the child: she said it had been put away. I then desired her to be cautious, and asked if it was born alive. She said it was. I inquired how she knew; when she said she heard it cry. (It may be necessary to state that this took place before the child had been found). I subsequently examined the body, which presented the appearance of a well-formed child at the full period of pregnancy; the head well covered with hair, the nails perfect, and the chest well expanded. The lungs gave the usual evidence of having been distended, which must have been with atmospheric air, as the child had recently been born, and could not have been the case unless the child had breathed. They (the lungs) were crepitous, and, on being cut into, air, mixed with frothy fluid, issued from the cells. There were no external appearances to account for death.

The following part of the deposition was in the shape of answers to questions put by the coroner, or jurors:—

It is *barely possible* it might have died from natural causes before being put into the cesspool. It might have died from not having proper assistance, if the position in which it was born was unfavourable. I cannot say that death *was* the effect of natural causes; there were no external appearances except slight lividity of the lips. Would not say that it had died by violence, nor that it had not.

Two sons of Hall, aged 15 and 13, were then called, who deposed to the following effect:—They lived with their father, and slept in the same room on Monday night; they were awakened during the night by the illness of the young woman Douglass, who complained of pain in the stomach. There was no urinary utensil in the room; but there was a pail which is kept by their father, who is a shoemaker, and used by him in his trade; it generally contains water. The young woman got up and sat on this pail for some time, and was then helped into bed by their father,

who afterwards lighted a candle and gave it to the younger boy to light him down stairs, whilst he carried the pail, which was covered over, and emptied it into the cess-pool.

On hearing the above evidence, I then stated that in all probability the child was born whilst the woman was sitting on the pail; that she, not being aware of the actual state of the labour, probably mistook the pressure caused by the child for an inclination to relieve her bowels, and desired to be placed upon the pail; in which case, as soon as the child's head was protruded it would cry. In a few seconds another pain would expel the shoulders, and then the whole body; on which it would fall into the pail. Now if the supposition be correct that the pail contained water, it would immediately be drowned; and even if there were only the discharges incidental to labour, they might, at the bottom of a narrow vessel, be sufficient to suffocate the child, aided by a favourable position, with the face downwards. My opinion is, that the child died soon after birth, from suffocation; but whether that was accidental or otherwise, I cannot say.

For reasons before stated I shall abstain from making any comment on the above; but it may not be improper to observe, that in cases of this kind, when public excitement generally runs high, it behoves the medical practitioner to be very guarded in his evidence; and if there be any room for doubt, surely the accused ought to have the benefit of it.

I have the honour to be, sir,

Your very obedient servant,

THOMAS PORTER.

145, Bishopsgate-street,
Oct. 16th, 1836.

THE LATE MADAME MALIBRAN.

To the Editor of the Medical Gazette.

SIR,

PERMIT me to make a few observations, suggested by your remarks on the death of Madame Malibran. By so doing, I am far from wishing to add to the irritation which this catastrophe has occasioned,—of which, be it said, *en passant*, I have had personal proof.

From having formerly attended upon that unfortunate lady, and from the similarity of the first syllable of my name, I have been mistaken for her late medical attendant, and have been exceedingly annoyed in consequence, to the great amusement of my professional friends, but little to my own satisfaction. Neither have I any intention of casting imputations on Madame Malibran's medical advisers. Her Manchester physicians are men of such well-known talent, that were I myself in danger, I should feel much reassured in seeing them at my bed-side. As to her homœopathic physician, I think that if a man practises openly a system fully explained to the public, and himself believes in his own creed, however absurd it may appear to us, he is conscientiously exonerated from its consequences*. To you, sir, who so well fulfil the office your epigraph sets forth — "Dignitatem Artis Medicæ tueri" — it belongs to overturn this new ephemera; a private individual, without the privilege of using the emphatic "we" of criticism, might be suspected of personal motives, if he attacked the homœopaths.

As far as I can judge by the reports of the case which have reached London, and to which I apply the intimate knowledge I possess of Madame Malibran's constitution, I think her death to be in a great measure due to the depleting system which it was very natural her first adviser should have adopted, not knowing the peculiarity of her nervous system, and for which they had not opportunity of compensating afterwards. A few details will prove this. Dramatic genius arises in a great measure from deep feeling; and this great tragic actress, for such she was above all, having, in the pursuit of her vocation, accompanied by great private sorrows, over-excited her nervous system, was subject to fits of hysteria akin to epilepsy, and to attacks of catalepsy, such as I have never seen elsewhere, and hope never to see again. For example; having been one day informed (falsely as it proved) that her brother was killed at Algiers, her whole frame became immoveable, and as suddenly as if she had been converted into a statue by the wand

* We are not aware that M. Belluomini *has* fully explained the practice he adopted: we know of no intimation of his treatment more specific, than that he "administered to the patient those remedies which he thought desirable."—ED. GAZ.

of an enchanter. She remained standing for two hours, neither hearing nor seeing any external object. Waking from this trance when her attendants were off their guard, she unconsciously precipitated herself down a flight of stone stairs, cutting herself severely in her fall. Being taken up, she remained inanimate and motionless, until, in the middle of the night, she was seized by an automatic movement, when she began to roll over and over from right to left; such a motion as Magendie, if I remember right, describes as taking place when the cerebellum had been pierced in a certain direction. Now, sir, for this malady, which I called my lamented friend, the late Dr. Maton, to witness, from experience of her constitution, no depleting remedy was applied, except a few leeches, in spite of the violent blow on the head. A day afterwards Madame Malibran insisted upon fulfilling her duties at the King's Theatre—was lifted into her carriage, not being able to stand—was taken out in the same manner—was dressed, while *sitting*, for her part in the Semiramide; and when the moment came that she was to appear, to the unutterable astonishment of her friends she rushed on the stage, and drew down thunders of applause by her unrivalled acting and singing. Every time she came off the stage she retched violently, till the blood came; and soon after the performance was over, relapsed into her insensibility. On other occasions, when other persons would have required bleeding, she recovered without it; and, on all occasions of illness, her frame required artificial support to a most unusual extent.

The last time I was called to her (the 23d April, 1833), it was for a severe sore-throat. I ordered some leeches to be applied in the evening. Being obliged to go out of town, I did not call again in the evening, as I had promised to do, before the application of the leeches. In my absence, a homœopathic physician was called, and attended her ever after. She then wrote to me to say that she had recovered without the application of the leeches, and, whenever I happened to see her, she laughed at my sanguinary system of *allopathy*, whilst I treated *homœopathy*, which had taken so ample a possession of her fancy, with similar irreverence.

I think, sir, these observations may be useful in practice, and will illustrate how cautious we must be in treating patients, in the vocation of our lamented cantatrice, by depletion, when we are not aware of the peculiarities of their nervous system. There may, however, have been reasons arising from the peculiar situation of Madame Malibran, when at Manchester, fully authorizing the means adopted by her first able medical attendants.—I remain, sir,

Your obedient servant,

HENRY BELINAYE.

17, George-Street, Hanover Square,
October 20, 1836.

DISLOCATION OF THE ELBOW-JOINT.

To the Editor of the Medical Gazette.

SIR,

HAVING read in a late number of your excellent journal some very interesting cases of injuries to the elbow-joint, by Mr. Collier, I am reminded of an uncommon accident, to which I was called about twelve months since, in the person of a young lady, who was thrown from a gig, in consequence of the horse falling, and was precipitated with great violence to the ground.

On my arrival, about two hours after the accident, my attention was directed to the left elbow, which received its injury by the carriage during the fall, and, I have reason to believe, by the weight of the body falling upon the hand. There was total inability of the limb, which was slightly bent, and pronated, but an attempt at flexion, or extension, produced great agony. The joint was much swollen and deformed, but after some little time I discovered that the head of the radius was partially dislocated forwards; and on grasping the condyles of the humerus, and partially extending the forearm, I perceived also a decided crepitus at the internal condyle, which proved to be an oblique fracture of that bone.

The reduction was accomplished by fixing the humerus steadily, and making extension from the wrist, by which means the radius was brought into its proper situation; at the same time due compression was made at the fractured condyle. I immediately applied a bandage around the arm, bent the limb at a right angle, placed on a long splint,

had recourse to leeches, saturnine lotions, and the antiphlogistic treatment, and at the expiration of one month I commenced passive motion.

I have the satisfaction of adding, that although the elbow remains *partially* anchylosed, it is sufficiently useful for the common purposes of life.

Should you deem the above case worthy of publication, it is at your service, and I remain, sir,

Your obedient servant,

S. W. KIDGELL.

Pangbourn, Berks,
Oct. 7, 1836.

MEDICAL GAZETTE.

Saturday, October 22, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

FRESH ILLUSTRATION OF THE NEW POOR-LAW SYSTEM.

THE Poor-Law potentates have made an example of one of their officers: they have cashiered him publicly — *pour encourager les autres*.

But what a farce is this that they have attempted to play! In the sight of an offended community, well acquainted by this time with the thorough inhumanity which clings to their proceedings, they have had recourse to the most shallow trickery: with their character for narrow-souled tyranny branded on their front, they have ventured to try a delusion on the public—to create, if possible, a belief that they are actuated sometimes, if not by clemency, at least by stern justice, in the discharge of their duties. A poor wretch loses her life through the criminal inefficiency of the system adopted by the functionaries of the *amended* Poor-Law: public indignation is anticipated: they fasten on one of their degraded officials—unfortunately a member of our profession: they exercise their inquisitorial powers over him: make him their scape-goat, and fancy they have thereby exculpated themselves from every imputation. The thing is too gross.

We protest that we are wholly free from any partial feeling in this matter. We have no sympathy whatever with the medical man who has been victimized for the expected benefit of his employers. He was probably a *contractor* for pauper medical attendance, and undertook to supply his medicine and advice at the lowest possible rate; otherwise we are satisfied he would not have obtained the appointment. At all events, in accepting the terms of the guardians, he undertook duties and an amount of responsibility which a conscientious practitioner would have shrunk from. He has forfeited, moreover, our good opinion, in submitting to treatment derogatory to the respectability of the profession; and has lowered himself in our estimation, by the pitiful concessions and mean promises which he tendered, of being no more guilty of such high crimes and misdemeanors, if their honours would but let him off this once. Yet the injustice of the case is too manifest to be obscured by the demerits of the sufferer.

The circumstances have appeared in the newspapers: they may, however, have escaped the notice of some of our readers, and it may be as well to state them briefly.

On Wednesday, the 3d of August last, at three o'clock in the afternoon, application was made to the relieving officer of Harpenden, for a medical attendant for Mrs. Howe, a poor woman, aged 40, who was very ill. An order was granted, and forthwith taken by the applicant to the medical attendant; but the latter received no intimation of the urgency of the case: he was not told that Mrs. Howe had small-pox. The part of the parish where the patient resided was five miles

from the residence of the medical practitioner, and it was only the same day that that officer had gone his rounds in Mrs. Howe's neighbourhood. Not until nine or ten o'clock on Friday morning did he visit the woman, in obedience to the order, and then he found her dangerously ill with confluent small-pox. She had, it seems, been nine days ill previous to his attendance. The medical man desired the persons who were with Mrs. Howe to send immediately to his house for medicines, acquainting them with the dangerous condition of the patient. It was not till Saturday noon that a person called at St. Alban's for the medicines; but the patient was already dead: she had expired at six o'clock that morning.

Such are the plain facts—damning enough, in all conscience, of the system under which they occurred. A woman, after struggling for nine days with the fever of variola, of the worst kind, obtains, through the circuitous route of an application to a parish relieving officer, a visit at last from the medical man whose duty it is to attend. He lives five miles off, and urges the friends of the patient to send immediately for the necessary medicines. This is neglected, and the wretched patient dies without any medical succour having been administered to her. What worse could have befallen her in the most uncivilized country? Yet here is England, and its *amended* Poor-Law system!

But if any thing can be worse than the system, it is the conduct of the functionaries who uphold it. We just now complained of the injustice exercised by them in this case towards their medical officer: we have a few more words to say on the subject. It was unjust, we assert, to visit with so much severity (if dismissal from their service be really a severity) the medical attendant who failed to undertake a five miles' journey at a moment's notice, in order to see a patient, of the nature or urgency of whose case he received no intimation. This, however, is not the worst. It has never been the practice for parish surgeons to *send* their medicines: to expect it to be done in the present case—a distance of five miles—was unreasonable: to make it a charge of breach of contract, was iniquitous. Yet what says Mr. Secretary Chadwick in his sentence of condemnation? "The Commissioners consider that the reason assigned is insufficient, inasmuch as the circumstances under which the pauper was found, her dangerous illness, and the previous neglect (or inadvertence, as the officer represents it), prescribed a deviation from the ordinary practice of waiting until the medicine was sent for by the parties."

How easy it is to preach, even when we forget to practise! The humane Commissioners, of whose humanity we have never yet had a practical instance, think that the state of the unhappy pauper should have quickened the zeal of their officer: and because he did not exhibit more bowels than they ever showed, they have dismissed him.

The most disgusting part, however, of the transaction is the mean shuffling practised by the Commissioners, to transfer the blame to the medical man which so evidently belongs to themselves and their system of conduct.

Let the case be a warning to *contractors;* let those who have the ambition to hold the high post of medical officer to a Board of Guardians, be aware of what awaits them should any untoward accident bring the system of *relief* into discredit. Fulfilment of their contract will be insisted on to the letter; and no emergency occurring in private practice may be pleaded in excuse for a neglect of the contract duty. Hear one or two of the interrogatories which we meet with in the present case:—

"But you are aware that your contract is to attend to the parish people, independently of your practiee?—This unfortunately happens to be a solitary case. If I had had any idea of the woman's illness, many medical men near me would have gone to see her.

"You are in any eircumstances responsible; but in that ease, if you had been aware of her illness, and you had not attended, you must be aware what a heavy responsibility, legally as well as morally, you would have incurred: but since you eannot tell with regard to any case that it may not be a dangerous case, you must be aware that it is clearly expected that the attendant should be prompt. And all the instructions you may have reeeived from the Assistant Commissioners, the Guardians, or other persons in authority, must have led you to believe that the attendanee under this new Poor-Law would be required to be mueh more rigid than that required by the paroehial offieers under whom you have heretofore served. You say you have been aecustomed to attend the parish poor for a number of years?—*Yes, for thirty years.*"

The whole case is pregnant with a moral lesson; and if contraetors will not mark, learn, and inwardly digest it, they must be lost to all power of ordinary pereeption. They see here a praetitioner of *thirty years'* standing, perfeetly familiar with the mode of eonducting parish medical relief, yet upon the oeeurrence of an accident ealculated to exeite public displeasure, the honourable Commissioners sacrifice him, and throw him overboard!

SIR WILLIAM KNIGHTON.

The newspapers have already made known the decease of the late Sir William Knighton; and although he had long abandoned medical praetice, we think it incumbent upon us to place in our pages some reeord of one who once belonged to our profession, and whose career has been, in several respects, so remarkable.

Sir William Knighton originally entered the medical profession as apprentiee to an apothecary at Tavistoek; and after a residenee of a few months in London, returned to that town to settle as a general practitioner. This, however, not proving agreeable to his taste, or satisfactory to his ambition, he soon returned to London, and settled as an accoucheur. The College of Physicians having admonished him for practising as a physician without a degree, he went to Edinburgh, where he remained two seasons; and having obtained a degree from the Archbishop of Canterbury, was admitted a licentiate.

From this time, he remained in London till 1810, when he aecompanied the Marquis of Wellesley to Spain, and returned with him when the mission was at an end. On this nobleman retiring from offiee, he asked his late Majesty to appoint Knighton one of his physieians. Soon after this he became acquainted with Sir John M'Mahon, by whom he was speedily admitted to terms of intimaey; and they continued on the most eonfidential footing until the death of the latter, who made Sir William his exeeutor. Among the papers whieh thus came into his possession were some relating to certain private affairs of the late King. Instead of endeavouring to turn this eireumstanee to any profitable account, Knighton instantly carried the documents to Carlton House, and plaeed them at onee, without comment or condition, in the hands of the rightful owner. From that hour may be dated his admission to Royal favour: the Prinee Regent, struek at once with the importanee of the benefit and with the delieate manner in whieh it had been eonferred, appointed Knighton to an important offiee in the duchy of Cornwall;—in 1813, raised him to the baronetage; and, at a later period, presented him with the grand cross of the Guelphic order.

His reputation was now at its zenith, and his business eontinued very extensive till the removal of Sir Benjamin Bloomfield, who had sueceeded Sir John M'Mahon in the offiee of Private Seeretary. On the elevation of this gentleman to the peerage, and his mission to Sweden, Sir William Knighton, who had previously been a frequent visitor, now became an inmate, at Carlton Palace, was invested with the offiees of Private Seeretary and Privy Purse,—appointments whieh he retained till the death of George IV.

Before his connexion with the court,

Sir William Knighton practised chiefly, though not exclusively, as an accoucheur. He is said to have been extremely cautious of his reputation — always calling in additional advice whenever there was any manifest danger; and succeeded in amassing a very large fortune by his original profession. From the time of his accepting the appointments above mentioned, he of course wholly abandoned practice; but he still retained an intimacy with several members of the medical profession, some of whom were indebted to him for many acts of kindness and consideration.

He had latterly suffered from embarrassment of the breathing and oppression about the chest, which proved to be dependent upon enlargement of the heart, and ended in dropsical effusion into the right pleura and pericardium, which proved fatal on Tuesday, the 11th instant, in the 60th year of his age.

Sir William Knighton was unquestionably a man of excellent talents, but he was still more conspicuous for his fine sagacity and knowledge of the world. His success in life was remarkable, but such was at one time his interest at court, that it is quite certain he might have commanded almost any thing which the highest influence in the empire could bestow;—yet he never shewed himself either avaricious or greedy of honours. He was scrupulously punctilious in all the observances and etiquettes of society; but, amid the polish which his manners and character received from the circumstances into which he was thrown, he still retained unimpaired the impress of his early friendships.

HOMŒOPATHY.

(*From a Correspondent.*)

During the last two sittings of the London Medical Society, the disciples of Hahnemann have had field-days, or rather nights. The homœopathic orators were three—Dr. Uwins, Mr. Kingdon, and Mr. Headland. They all professed themselves *not* to be homœopaths, *while* they advocated the practice and defended the doctrines of Hahnemann! Dr. Uwins, however, when this inconsistency was alluded to, at the close of the debate, acknowledged that he was in a *state of transition* between allopathy and homœopathy; but that he was in a fair way to a full adoption of the new light. The homœopathic orators did not practise as they preach on this occasion: they dealt in most enormous allopathic doses of verbiage, but no substantial facts—no rational arguments. They monopolized two-thirds of the time during both nights. The allopathic speakers were — Dr. Clutterbuck, Dr. Johnson, Dr. Rees, Dr. Stewart, and Mr. Clifton. If we can form any judgment of the sense of a most crowded audience by the hearty plaudits which attended and followed the observations of the allopathists, and the peals of laughter which constantly interrupted and sometimes drowned the statements of the Hahnemannians, we should fairly conclude that there was not in the room a single disciple of the "Novum Organon" except the three speakers above mentioned. The speeches of Dr. Rees and Dr. Johnson caused great merriment by the ridicule with which they covered the principles and practice of homœopathy; while Drs. Clutterbuck and Stewart, in conjunction with Mr. Clifton, demolished the crazy fabric of Hahnemannism by unanswerable arguments. The President himself (Dr. Whiting), at the close of the debate, which he never interrupted in its course, declared his opinion that the homœopaths did not adduce one single fact, either in Mr. Kingdon's long paper, or in any of their speeches, which could fairly be considered as *evidence* in favour of the new doctrine.

Dr. Clutterbuck then proposed a resolution—that the society, after a patient hearing of homœopathic doctrine and practice, did not consider either of them to be worthy of the slightest attention from a body of enlightened practitioners. The homœpathists loudly objected to the proceeding; and Mr. Kingdon having pathetically remonstrated against it, as calculated to do him a personal and professional injury, as the author of the paper, and consequently the cause of the discussion, several allopathists interfered, and prevailed on Dr. Clutterbuck to withdraw his motion. It was quite clear that not more than three or four hands would have been held up in favour of the infinitessimal system.

It would have been wise, however, in the society, either to have declined the

subject of discussion at first, or to have come to some official conclusion at the end. The homœopathists, acting on their usual tactics, will magnify this discussion into one of the greatest triumphs which Hahnemann has yet obtained in any country! What! the oldest Medical Society in this metropolis arguing the topic for two whole nights, and coming to no conclusion at last, leaving the homœopaths master of the field,—as far as length of speeches, at least, is a criterion!! This is the very course they will pursue, and probably this was the very object they had in view when they entangled Mr. Kingdon in their web, and drew him into the snare, without any but honourable intentions in his own breast. The orators themselves, however, will long remember the miserable display which they made, and the unenviable position in which they now stand before the eyes of their professional brethren.

CLINICAL LECTURE

ON

RHEUMATISM.

Delivered at St. George's Hospital, Oct. 13, 1836,

By Dr. Seymour.

Various forms of the Disease: Diffuse and Bursal Rheumatism; Metastasis—Transference of the former to the Heart, of the latter to the Brain. Remedies: Bleeding, Guaiacum, Opium, Calomel, Colchicum.—Rheumatism connected with the Poison of Lead.—Case of Vomica bursting into the Pleura—very large Liver—Gall Stones.

I have been in the habit for many years past of giving clinical lectures at this season of the year. These lectures are simply and solely intended for the use of those students who are beginning for the first time, or nearly so, to attend hospital practice. In order to enable them to understand the views I entertain in treating any disease, I shall describe the disease, and then explain the reasons why particular remedies have been prescribed. I shall place myself as much as possible in the situation I myself was, when a student—desirous of knowing why such and such a remedy was ordered. This is the intention which I wish to fulfil; and I address you, not with the view of making a great display, but of making you comprehend, as nearly and as clearly as possible, the design with which medicines are prescribed for diseases, the nature of which I shall explain.

There were not many cases admitted on Wednesday last under my care, or any presenting great variety; but there were some which will lead us to make a few observations on a most important disease—rheumatism.

Rheumatic pain is a vague expression. "I think," to use the language of the lower classes, "I have got the rheumatics," means simply that the patient has pains in his limbs. Indeed, I am not sure whether the expression used by the higher classes of society is not equally vague. "I have got the rheumatism," is a complaint we hear every now and then, as applied to wandering pains.

Rheumatism has been divided into acute and chronic; and then there is also rheumatism arising from specific poisons, and rheumatic pains resulting from the introduction of certain metallic fumes into the body. These pains may be produced by the fumes of arsenic; and there is a particular kind of rheumatism—if so it may be called—from the poison of lead. Of the latter there are two specimens in the house, and these, therefore, will give me an opportunity of speaking to you of this disease, and of illustrating my remarks by the cases.

The most severe form, however, of rheumatism is the acute species, *rheumatic fever*, as it is generally termed; and of this we have two very excellent specimens at present—the cases of Eliza Young, in Crale Ward, and Jane Vaughan, in Roseberry Ward.

This disease is one which it is of very great importance in practice that you should understand. There are two kinds of acute rheumatism: sometimes they occur together, and in other cases separately. The cases before us are of the latter description. In one of these patients the muscles, the aponeuroses, and the ligaments of the joints, at the extremities principally, are inflamed. The other is a case in which there is effusion into the cavities of the joints, more especially the wrist, hip, and knee.

It will be of great importance to bear in mind, that the two kinds of acute rheumatism may occur together or separately, because the treatment and phenomena are of an entirely different character. The acute disease which affects the muscles, aponeuroses, and ligaments, with redness and swelling, is very apt to shift from one limb into another. We have a striking instance of it in the case of Ann Young: when she was taken into the hospital the pain was in the right hand; but when I saw her the next day it had left the right

hand, and was seated in the left; and to-day there is no pain at all; it has disappeared. Sometimes it shifts from one hand to the other in a very short space of time, almost in a moment; certainly in the course of half an hour. I have seen it suddenly leave one hand entirely, and affect the foot. This form of rheumatism, for distinction sake, is termed *diffuse* rheumatism, in contradistinction to that which is generally attended with the effusion of fluid.

Diffuse rheumatism is apt to leave an external, and affect an internal, part; or the latter becomes affected without any apparent diminution of the symptoms in the former; or the disease commences in the two parts simultaneously. The affection may occur in these three forms, but it most frequently happens that the pain in the extremities subsides when the internal viscus is attacked: when these symptoms take place it is called *metastasis*. I am not going to enter into any hypothetical views as to whether or not there really is such a thing as metastasis from an external to an internal part; I am merely speaking of the phenomenon as it exists.

The internal viscus, which is almost exclusively affected, at least so far as my experience goes, in diffusive rheumatism, is the heart; though the lungs are said to be sometimes implicated. What takes place is the pouring out of lymph upon the opposite surfaces of the pericardium, by which they are glued together, and the heart is impeded in its functions. In some cases the heart recovers its action, but in others it does not. The effusion occasionally takes place in great abundance, so that lymph is thrown out over the surface of the heart, and is sometimes mixed with pus, and in other cases, though rarely, with blood. This is the condition which is found when sudden death supervenes on an attack of rheumatism, or rheumatism of two or three days' duration. This, however, is fortunately an uncommon occurrence; I do not know that I ever saw a case, though I have read of such, and no doubt they are sometimes met with. Most frequently rheumatism attacks the heart in the course of the disease, and, so far as we can judge, the effect takes place which I have just mentioned—the glueing together of the pericardium and the heart, and the patient recovers, as it were, with a crippled heart—a heart unable to execute its movements. By degrees the cavities enlarge, the circulation becomes interrupted, dropsy supervenes, and at some distance of time the patient dies. Sometimes, on recovering from the rheumatism, the patient is affected with palpitation; a second attack takes place—for it is remarkable how constitutional it sometimes appears to be—and lymph is again thrown out; so that, after death, we may sometimes count the older and later lamina of lymph which have been deposited during successive attacks.

This is the most important view which you can take of rheumatism. You are not, however, to suppose that this often happens; on the contrary, it only occurs in certain cases, generally where the disease has been neglected in the first instance. When the disease has once taken place, though the patient may experience palpitation, distress, and all the inconveniences arising from it, yet he may live for many years, and be liable to successive attacks, until they are so severe as to cause the heart greatly to enlarge, and sooner or later dropsy ensues. Here is a drawing [presenting it] taken from a boy 13 years of age, who died of rheumatism of the heart after repeated attacks. Between the layers of the pericardium, that portion which is reflected over the heart, and that which is opposite, there is an enormous quantity of lymph deposited, which has become organized through the disease having been of long standing.

The danger, then, in acute rheumatism consists in this affection of the heart; and when a man dies under it, the disease will generally be found to have terminated in this way. There are, however, other terminations. The disease may sometimes end in suppuration; but this is not very common; and I have never seen but one case. It much more frequently terminates in a deposition of lymph in the muscles, aponeuroses, and ligaments of the joints, so as to render these parts inflexible.

The two cases under consideration are in the early stage of the complaint: one patient has been ill for a fortnight, and the other, according to her own account, has only suffered from rheumatism two or three days.

The great object in the treatment of this disease is to extinguish the complaint without the changes taking place to which I have referred—the attack of an internal viscus. The treatment divides itself according to the form which the disease has assumed, and the part which has become attacked. Sometimes where the heart is not affected, as in the cases up stairs, there is great pain, which is sometimes increased and sometimes diminished by heat, affecting generally the hands and feet, sometimes the shoulders and knees; a very quick pulse, a furred tongue, and considerable heat of skin are present—in fact, fever. Blood, when drawn early in the disease, is generally much buffed and cupped; as much so as in any febrile disease with which I am acquainted. For instance, Vaughan, who

has only been labouring under the attack a few days, was bled as soon as she came in, and the blood was buffed and cupped. The disease still being severe, I had the venesection repeated, and the blood was again as much cupped as in inflammation of any serous membrane. I must, however, warn you, that experience has shewn that it is not good practice to continue bleeding in the same proportion as in inflammation. You may go on bleeding a rheumatic patient, where the blood is buffed and cupped, with the hope of diminishing it, and yet you will find it present till death ensues. But, on the other hand, I should warn you against withholding the use of the lancet in the early stages of the disease. There was no question in the profession discussed so much as the propriety of bleeding in rheumatism, especially after Dr. Haygarth's paper. It was looked upon by some physicians that bleeding, notwithstanding the state of the blood, was the cause of the transference of the disease to the heart. I can only state, from my own experience, after many years spent in this hospital, and the practice which I have seen in other places, that if in cases of acute rheumatism, with symptoms such as I have described, where there is much inflammation, with a quick pulse, and great heat of skin, you do not use the lancet early, you will have cause to repent it; though the time will come when it would be highly improper to resort to it. It is a severe form of the disease where we are obliged to have recourse to it; and in VAUGHAN'S case I have been compelled to bleed twice. She is a young woman, very robust; and the relief has been commensurate to the loss of blood. YOUNG had been bled before she came in, and it was not a case for me to resort to it. The pulse was 100; the patient was not strong, indeed she was pale from the loss of blood; and there was no heat of skin. At first one hand was swollen: subsequently the other became affected; and to-day I find, after the treatment adopted, that neither hands are swollen, and the rheumatism is subsiding with great rapidity.

There are various modes of treatment on which physicians have determined, for the cure of diffusive rheumatism in which the heart has not become diseased, and the affection is in its early stage. The treatment I have been in the habit of pursuing, is to exhibit (after bleeding, where that is requisite) the guaiacum mixture. This is prepared by rubbing down guaiacum with gum arabic, and then adding to it cinnamon water, and sugar. If you mention this to persons who have not tried it, they will tell you that rheumatism is an acute disease; thinking you mean the ammoniacal tincture (a medicine much in use in chronic cases); but this tincture is of a stimulating nature. The mixture which I have mentioned has a powerful effect in relieving the rheumatic symptoms; at least, in my experience it has been very great. I must have seen fifty cases cured by this method, and cured as quickly as by any other means which I have either used or witnessed. An ounce and a half of the mist. guiaci of the Pharmacopœia may be given every four hours, together with barley water. The medicine determines to the skin, producing a sudorific effect on that organ, and likewise acts on the bowels. Sometimes it acts too powerfully on the latter, and then it is necessary to give a grain of opium at bed-time. Under this treatment, combined with the use of the lancet, and keeping the patient on low diet, I have, in a great number of instances, seen the severe form of acute rheumatism give way. I have never, in a single instance, to the best of my recollection, seen metastasis occur in the progress of the cure. I am not telling you of a new or recent practice, for these are the remedial means which I have pursued for eight or nine years. I first learned this method in Edinburgh, where I found it more resorted to than any other mode of treatment in the clinical wards of the hospital. I do not know that it will cure a patient more quickly than calomel and opium, but calomel and opium make the mouth sore and affect the bowels, whereas this is attended by no such consequences. When the woman was admitted, who had been ill a fortnight, I had some fear of an affection of the heart, and I administered calomel and opium; but finding that that was not the case, I changed the medicine, and to-day the report is as satisfactory as it can be. There is no swelling of the hands, the tongue is moist, there is much perspiration from the medicine, the bowels are open, and the pulse 106. The other case is more severe; but as it is only of two days' standing, I have not yet ascertained the effect of the medicine. She still continues under treatment, and you will have an opportunity of observing its influence upon the disease.

This is a form of the complaint in which the heart has not become affected—in which we have the patient in the acute stage; and I can recommend this practice as being as certain of curing the disease as any particular mode of treatment is in any other affection. But suppose the case comes in with the heart already attacked—then this treatment is not sufficient. The patient, in this case, should be bled; but in a small quantity, and in the recumbent posture, because syncope is apt to take

place. Considerable doses of calomel and opium should then be given, the object of which is to arrest the progress of the deposition of lymph; and if exhibited in sufficient quantity, it frequently produces this effect. I have seen patients in the most perilous condition, with a disposition to syncope, with a quick and irregular pulse, and sinking of the countenance, put under the operation of five grains of calomel and one grain of opium three times a-day, with the effect, in four or five days, of diminishing all the symptoms. These are cases which I have witnessed over and over again. The quantity of mercury which may be given during the disease, without doing more than arresting the symptoms, is quite remarkable. I remember a case which I saw, under the late Dr. Young, in which the patient took ten grains of calomel daily, in acute rheumatic pericarditis, for fifteen or sixteen days, and never at any time did the mouth become sore. This is one of the instances in which I have frequently had occasion to point out the effect of medicine on disease. If the patient were in health, a fiftieth part of the mercury would produce constitutional effects; but here the power of the remedy is expended on the disease. This is well known in many cases, but it cannot be better illustrated than in this instance.

I have spoken of two forms of rheumatism—mere diffuse rheumatism, and diffuse rheumatism transferred to the heart. Where no transference has occurred (I use that term because it is a simple word, though the disease may occur without any evidence of the transference), and, in the second form, where it has already taken place, various persons have different methods of treatment: some treat the acute form with bleeding and antimonials, others with calomel and opium, and it is a common practice with some to exhibit colchicum, combined with Dover's powder, as a sudorific.

It sometimes happens that this disease lasts a great length of time; the heart is not attacked, and yet the patient does not recover. This constitutes what is called an *obstinate* case, and presents itself once, perhaps, in twenty or thirty instances of the affection. The patient has perhaps been bled, taken colchicum, and also calomel and opium, and yet the disease rolls on; and in other instances he has not taken any of these things—he has not taken medicine at all, in any considerable quantity—and the disease is still severe. The patient, in such a case as this, complains of violent pain, the surface is pale, and, in addition to that, there are constant sweats breaking out over the body, which are of an acid character, and accompanied with acute pain. The pain is aggravated by warmth, rather than relieved by it. When such is the case, we have a remedy the effect of which is quite magical: a grain of opium, administered every four hours, will sometimes entirely cure this form of the disease in a way hardly credible. Some years ago, I saw a case which might be called one from constitutional disease: it occurred in a lady, thirty-five years of age, who was attacked with severe rheumatism in the summer. The case was the more alarming from the fact that she was one of a family three of whom died of rheumatic pericarditis in early life; but she never had any symptoms of the disease till she was thirty five. She was bled, and the usual remedies were applied, with some measure of relief; but still the disease went on, and neither calomel and opium, nor guaiacum nor colchicum (for the case was treated, in the first instance, as an inflammatory disease), was of the smallest service. A consultation was held, and I met Dr. Nevinson, who recommended, as the patient had been ill a month and the disease had but little abated in violence, though it had sometimes left her for a few hours, that a grain of opium should be given several times a-day, which had the desired effect. Some of you have seen cases in the hospital treated in the same way, and with the same success. The cases where you must have recourse to it, are where the pain is very severe — where it has continued some time, is not relieved by warmth, and is accompanied by this acid perspiration.

I should say something on the employment of colchicum. Colchicum has been considered useful in rheumatism, and I will describe the particular form in which it is beneficial—viz. synovial rheumatism. It may sometimes be of service in the diffuse form, but it as often fails; I think, oftener. In cases where the heart is attacked, I have, in my experience, had to repent its employment. It knocks down the vital powers, and the pulse becomes exceedingly irregular, so that it is best not to give it in this form of the disease; but in another variety it is very useful. In the diffuse form I have seldom seen the good effect of colchicum. Once, in a severe form, complicated with effusion into the joints, the expressed juice, with opium, was of great benefit: but in no other form is it so useful and decidedly beneficial, as in synovial rheumatism.

I stated that there were two kinds of rheumatism—that it affects the muscles and the joints; and these may occur together or separately. In the cases under consideration there is no effusion into the joints; but in a case up stairs, fluid has been rapidly effused into them, without

affecting the muscles or tendons. When this is the case, there is a difference in the symptoms, which I shall point out; a difference in the march of the complaint and in the method of cure. By making this distinction, you simplify the practice very materially.

In synovial rheumatism the lancet is not so much required as in the diffuse kind; and here colchicum, as I have said, is exceedingly beneficial. I have seen it in many cases. I had a case last summer, entirely cured, in a very short space of time, by colchicum alone. There are various forms in which it may be employed. Half a drachm of the vinum colchici may be given in camphor mixture, and half a scruple of magnesia is generally added. Some suppose, from the acidity that is present, that there is a separation of the colchicum wine and a throwing down of a sediment, on which its benefit depends; and this is prevented by the magnesia. This may be given twice a day, or three grains of the acetic extract with five grains of Dover's powder. In the majority of instances you will relieve this form of the complaint.

I told you that the march of the disease was different, and I will explain why. This form is sometimes transferred to an internal viscus; but the cases in which this takes place do not bear the proportion of one to forty, compared with the transference of diffuse rheumatism to the heart; and when an internal organ does become affected, it is the brain, and not the heart. This is worth bearing in mind. Unfortunately, it is not uncommon to see rheumatic pericarditis; but fortunately it is very uncommon to see affection of the brain from the transference of synovial rheumatism. I have only, in my own experience, seen five cases—four in private practice and one in the hospital; whereas, in the same space of time, I have seen fifty cases of the other form of the disease. This shows you how very important it is to comprehend it. A case of the transference of synovial rheumatism to the brain, took place in the hospital last spring. A man came into the hospital, in whom some of the joints were as large as a child's head, from effusion, and he was in a perfectly cachectic state of body: there was a white tongue, with little appetite, and no fever. He had taken colchicum for some time, without manifest advantage. I thought the best plan appeared to be to put him on a tonic medicine, as he was in such a cachectic state, and to bring up the constitution so that he might bear other remedies. For this purpose he was ordered bark, and I gave him a little meat, but no porter—nothing stimulating: indeed the full diet of the hospital is not so much as persons eat in ordinary life, in health. He appeared to be somewhat better. I one day observed the knees becoming flaccid, and, in fact, they were reduced one-half in size. He was attacked with violent pain in the head, there was palsy on one side, and within the space of thirty-six hours he died.

Upon opening the body, it presented a remarkable appearance. Over the left hemisphere of the brain there was deposited a thin layer of green purulent matter, so as to cover it over, and some fluid was found in the ventricles. Never at any period before or during the attack was there any symptom of that increased action which generally precedes a paralytic attack. Here was one form of rheumatism transferred to the brain. In using the word *transference*, let me again mention that I only wish you to understand it in the common acceptation of the term: I am by no means giving it as my opinion that the disease is transferred from one situation to another, but that upon the cessation of it in the joints this affection takes place in the brain. This is as clear as I can make the subject. The two diseases may occur together or separately, and there is a distinction in the symptoms, the treatment, and the termination. The remedies which are applicable to the one are not so applicable, if applicable at all, to the other. But you may have complicated cases, in which there is diffused inflammation, together with effusion into the joints; and in these cases, adding to the ordinary treatment some preparation of colchicum is generally of great service.

You will watch the cases to which I have referred, and I think you will see that the cure will be very rapid.

There is a case in Crayle Ward of a woman who came in with rheumatism of the joints, and I point out the case in order to show you one of the terminations of this synovial rheumatism. She entirely recovered with the exception of one knee-joint. You will sometimes have this occur: the patient will recover with the exception of one joint, which is more inflamed than the others, and some stiffness remains. The case is now nearly cured; and will, I have no doubt, get perfectly well.

There is also a case in the hospital, under my care, of chronic rheumatism. It is one in which a slight acute attack has passed over, but there is still great difficulty in moving the limbs, from some remains of pain in the joints. It is the case of an old woman in Roseberry Ward. She is 70 years of age, and laboured under fever from cold, since which time she has had diminished power of the lower extremities. This is marked to show that it does not depend on an affection of the brain, but on rheumatism, which has

ended by impairing the powers of motion. It affected her hands and knees. As the bowels were not opened, I ordered her to be purged, and then to be placed in the vapour bath. This leads me to mention the great utility, in some cases, of this practice. The being able to administer these baths readily, is one of the greatest modern improvements. There is one upstairs, in addition to which they may be brought to the bed of the patient, and copious perspiration may be readily excited. They are an excellent substitute for the external use of Bath water, which is so effectual in most cases.

In the chronic form of the complaint, the fever having disappeared, the warm and the vapour baths are useful; but because they are serviceable in rheumatism, have a care not to recommend them in the acute form, for, so far from being applicable to it, on the contrary fatal results may take place. I have known disease of the heart ensue after a blunder of this kind; and I have known them bring on a state of great excitement and fever, instead of the febrile action being diminished. The bath acts as a stimulus in the acute form of the disease, and is therefore contra-indicated. In the chronic form, where the parts have lost their elasticity, and where fever no longer remains, to such a condition are they applicable.

There were also two other cases admitted, to which, being of a different kind, I shall call your attention. They are cases arising from the introduction of a morbid poison into the system—the poison of lead. One case is that of a man named Claney, a coach-painter, who is lying in York Ward. He has been subject to the complaint for six years. The joints are neither affected with redness nor swelling; the bowels are constipated, and there is a cacheetic state of the countenance, arising from his employment. He has been under medical treatment, without relief, for many weeks. The other is the case of Redding, in Hope Ward, who is suffering under a more advanced form of colica pictonum, with slight palsy of the hands.

I will explain what is the effect of lead taken into the constitution. What is the first impression, I cannot exactly say, but the symptoms which follow are, pains of the limbs, loss of appetite, great degeneration, as it were, of the general health, and the patient looks as if there was no red blood in the body. If he still continue to work at his employment, contraction takes place in the muscles of the abdomen, and probably in the muscular coat of the intestines, and the bowels are drawn back, so that when you place your hand in that region, you appear almost as if you touched the spine. There is obstinate constipation under this form of the disease. This, as I have said, is termed *colica pictonum*. The word *pictonum* has been first derived from the inhabitants of Poitou, a province of France, and the disease was first described by the physician to Cardinal Richelieu, in the time of Louis the Thirteenth. It was proved to depend upon acid wine being made in leaden vessels. The wine dissolved a small part of the oxydized lead, and the persons who drank of it were affected with the disease. As it occurs in persons who work in lead, and very frequently in painters, it is sometimes supposed that *pictonum* is the Latin for painters. This is the most general form of the disease, and then it is termed *painter's colic*. If the patient has suffered one or two attacks, and still continues to work in lead, after a time palsy of the extensor muscles of the fore-arm takes place, and the hands drop. If even after the restoration of these the man still remains in the same employment (and what this poor man told us is often the case—that if he did not work in lead he had no other means of obtaining subsistence) various symptoms take place—epileptic fits, and an affection of the bronchi, with expectoration, very similar to phthisis. Sometimes, likewise, there is effusion into the joints, which is called rheumatism from the poison of lead. I remember having in the old hospital three cases at one time in one ward, in which there was synovial rheumatism arising from the poison of lead. In a very old work, called Musgrave on Rheumatism, you will see several cases well described. At the present time we have only two cases, one labouring under general pains from the poison of lead, and the other suffering under colic; and we have the commencement of palsy, the bowels very costive, the extensors of the fore-arms paralyzed, the abdominal muscles drawn in, and of course when there is an endeavour to make the bowels operate, there is very great pain.

In this instance the cure is most generally allotted to some purgative, combined with opium, to relieve the spasm, and followed up by castor oil, which is, of all other remedies, the one best adapted to effect a passage in such cases as the dry belly-ache in the West Indies, where the disease arises from making rum in vessels with leaden cramps, and in Devonshire, from making cyder in such utensils. After a free passage has been obtained, the warm bath should be used; and when the patient's health becomes better, great stress has been laid on the use of balsam of Peru, and consequently I am in the habit of giving it when convaleseence is commencing. It strengthens the muscular fibres which have been affected.

You will be enabled to watch these two

cases, and I have no doubt that they will both recover. In the worst case the palsy has not gone to a great extent. Some recommend placing the hands on a splint, so as to give support to the extensor muscles. I have seen this practice pursued, and I think with some good effect. It was recommended by the late Dr. Pemberton, of this hospital. You will find in the Transactions of the College of Physicians some interesting papers on the effect of the poison of lead, by the late Sir George Baker, who took great pains in investigating the Devonshire colic, and discovered that it was owing to this solution of lead, effected by the action of a vegetable acid upon the troughs in which the cyder was made.

I think that I have laid before you a good number of points for your consideration as you go round the wards. I have explained my reasons for the remedies which have been laid down, and the general circumstances in the cases to which your attention should be directed.

On Friday next I shall take up some other point, describing, in the first instance, what has been the progress in those diseases to which your attention has now been called.

Before you leave me, I beg your attention to some morbid appearances brought for your inspection. The patient in whom these were found was under the care of my colleague, Dr. Macleod. You will see the account of the symptoms during life in his case-book, and he will readily afford you any further information.

There is a vomica in the right lung, which has perforated through the pleura, pouring out fluid into the right cavity of the chest, through the aperture, which is rather larger than the circumference of a split pea. There were found no less than 125 gall-stones in the gall-bladder, which you see here—one nearly as large as a walnut, the others much smaller. When these little bodies are pressed forward, so as to obstruct the duct, jaundice often takes place, with violent pain at the epigastrium and in the back, with frequent vomiting, and a *slow pulse*. This constitutes what is termed bilious colic. The liver, you will also observe, is double its natural size, and, in fact, occupied a large portion of the abdomen, reaching to the crest of the ilium; and yet there was no dropsy. The worst cases of ascites, as I shall have occasion to show you, do not arise from enlarged livers, but in consequence of the liver being uniformly contracted, often to half its natural size, and the peritoneal coat is usually thickened in patches.

I have thought it desirable to give you an opportunity of examining these appearances, though I must refer you to the physician under whose care the patient was for an account of the symptoms during life.

ST. GEORGE'S HOSPITAL.

Ligature of the External Iliac Artery.

On Thursday last (20th), the external iliac was tied, at St. George's Hospital, by Mr. Walker, for femoral aneurism. The operation was very skilfully performed, and there is every reason to expect that the patient will do well.

UNION OF THE EASTERN WITH THE GENERAL PROVINCIAL ASSOCIATION.

To the Editor of the Medical Gazette.

Sir,

The tone of your remarks upon my last communication induces me to give you early intimation of the fulfilment of my wishes with regard to the junction of the Eastern Provincial Medical and Surgical Association with the General Provincial Association.

This, I consider, was effected on Wednesday last, at a meeting of the Council of the late Eastern Society, in Norwich, when it was unanimously resolved, that "its members do immediately join the parent Society, on the terms proposed by the Council of that body, through Dr. Hastings."

Thus one hundred and sixty, or seventy, members will be at once added to this excellent, useful, and flourishing Society; and I feel convinced the South of England will speedily imitate our example, and that the practitioners of England will be connected in one great and powerful body, admirably adapted to defend the profession from all the attacks which individuals, or the legislature, may make upon its respectability or rank, and to promote its scientific and successful cultivation.

Hoping that you will take an early opportunity of making this junction known to your numerous readers, in any way most congenial to your feelings,

I remain, sir,
Your obedient servant,
J. Godwin Johnson.

64, St. Giles's-street, Norwich,
Oct. 14, 1836.

MORE PLURALIST LECTURERS.

To the Editor of the Medical Gazette.

Sir,

In the last number of his journal, that most disinterested and impartial person

the *honourable* M. P. for Finsbury, has attaeked the Aldersgate School on the plea of some of the teachers lecturing on more than one branch. They do so; but had not Mr. Pereira's admirable lectures been published in the GAZETTE, and had not Dr. Cummin's, whieh promise to be equally valuable, been now in progress, I dare be sworn Mr. Wakley's virtuous indignation would have slumbered. As, however, he has mooted the subjeet, I must request him to look at home; and he will find in his own school in Gower-street, precisely what he condemns elsewhere. With his usual dishonesty he misrepresents facts,—separating and announcing as distinct courses what is given in one and the same eourse in every sehool in London. Such, for example, as Therapeuties, which he makes a distinct eourse from Materia Medica; Theory of Physic distinct from the Praetice, and so on of others;—the purpose being to make it appear that there are twice as many eourses as lecturers!

Now, sir, aceording to Waklcy's method of reckoning, his new *protegé*—his Magnus Apollo (for the present season)—lectures on five different subjects; and according to the most favourable mode of reckoning, does actually give *three* totally distinet eourses; thus:—

Therapeutics .... Dr. A. T. Thomson!
Materia Mediea .. Dr. A. T. Thomson!!

Medical Jurispr. . Dr. A. T. Thomson!!!
Toxicology ..... Dr. A. T. Thomson!!!!

Clinical Medicine, Dr. A. T. Thomson!!!!!

"There's a display for you!" (*Vide* Lancet.)

Again, his *pet*, Dr. Grant, stands much in the same predicament as his eolleague, Dr. Thomson, as appears by the published advertisements—thus:—

Comparative Anatomy ..... Dr. Grant.
Zoology ..... Dr. Grant.
Geology (a part of the course), Dr. Grant.
Fossil Zoology (separately advertised) ..... Dr. Grant.

Not to mention—

Physiology (at his own house), Dr. Grant.

nor his engagements to lecture at other schools. So much for Wakley's impartiality! "They who live in glass houses," Mr. Editor;—but the proverb is rather musty.

Your obedient servant,
AN ALDERSGATE PUPIL.

October 17, 1836.

CAMBERWELL PRACTITIONERS AND THE POOR-LAW MEDICAL CLUB.

To the Editor of the Medical Gazette.

"All seems infectious that the infected spy,
As all looks yellow to the jaundiced eye."

SIR,

IT is not my intention to follow a late correspondent of yours through the elegant terms of his vocabulary; it is quite evident that he is a "stickler against the clubbists." I am sure that you will not feel surprised that I have no desire to see my name put forward with, probably, the title of *knave* or *king of clubs* in your next number. I would willingly shield myself from that honour; but, in defcrenee to your opinion I will throw off the mask, and will ask any unprejudiced mind to view the situation of those two practitioners (Messrs. Flower and Young, of Camberwell Green, the latter a partner of Mr. Forbes), each paying rates to the collector (Mr. Prebble, of Camberwell), whether they may not fairly be termed Camberwell practitioners. I think the letter in the same eolumn, from Mr. Bowen, suffieient to set that matter at rest. And now to the question—"Can he show us how this innovation will benefit the poor man?" I reply, certainly not; as there is nothing so impervious to argument as the blindness of prejudice—

"A man convinced against his will,
Is of the same opinion still;"

but I presume there are many eool and reflecting minds to whom I may address myself with more prospect of suceess. Is it, I ask, no benefit to a poor man to have plaeed within his reach the option of selecting, from the general praetitioners of a neighbourhood, his own medical attendant, and not be eompelled, for fear of incurring to *him* a ruinous bill, to have recourse to the parish surgeon?

Ask the man of prineiple, whom a reverse of circumstances has driven to the threshold of despair, and who is but a few stages removed from the workhouse, with a wife or some of his children lying on a bed of sickness, whether he feels it a benefit to be able to avoid this first step to pauperism (viz. having recourse to the parish surgeon), but to have plaeed within his reach a number of practitioners, upon whose kindness and attention he has a positive claim? and I fear not to hear his reply. I venture to say there are but few medical men so "fallen," as to consider themselves degraded by attending this man's family, or to be *scared* from their duty by

having applied to their name the paltry term *clubbist*. I envy not the feelings of such men. Yes; there are those, constituting, too, a numerous class of professional men, who consider it no degradation, no dishonour to the professional character, to lend their assistance in endeavouring to raise the *moral condition* of the poor, by cherishing that feeling of *independence* which has been too much neglected, and which, I had almost said, was a national blessing; and they are not to be deterred in contributing their *mite* to this object, from a feeling that had they acted differently, they might perhaps have screwed out the last shilling from the wretched sufferer. True it is, that we may occasionally get a bill of two or three pounds from the honest and industrious poor; who, if we could witness the deprivation both themselves and families endure rather than apply to the parish surgeon, it would add but a fresh proof, if any were wanting, that it needs no argument from my pen to convince the spectator of this scene; that it *is indeed a benefit*, and will be *felt and estimated as such by the poor;* and that it *will not, cannot*, tend to injure and degrade the profession. With such an object in view, let us lay aside all party feelings; and if we are not able to appreciate or feel that it is a benefit to the poor, we are at full liberty to decline giving it our support; but let us have the modesty not to apply to those who differ from us in opinion terms of the grossest abuse; and pray let us hear no more about "shedding the last drop of blood in the cause."

The plan has also the further recommendation of acting on the principle that the man who does the *work* shall have the *pay*. Now it is a well-known fact, that hitherto the profession generally have been in the habit of giving their advice and medicine to many of the poorer classes in their respective neighbourhoods; considering the parish surgeon, from the extent of his district, the numerous calls to which his situation subjects him, the addition of his private practice—to say nothing of the prejudice too often entertained against him; these, with other causes too numerous to mention—such as the repeated applications made to private practitioners by women in a state of actual labour, who, either from aversion to the parish surgeon, her own neglect in not applying for an order; the fear lest, when it is obtained, he will not attend himself, but send some youth; these, with other reasons which my time will not permit me to enumerate, cause a considerable number of midwifery cases to be thrown upon the hands of private practitioners, who do not receive even the small sum to which the parish surgeon is entitled for his attendance—to say nothing of the answers she sometimes receives to her application during her hour of trial; one desiring her to apply to the parish surgeon, another asking who is to pay *me* if I come. In the meantime she is perhaps confined, and the child or children, as it may be, for want of timely assistance, are dead, and the life of the woman endangered. To remedy these evils, "let the man who does the work have the pay." I shall not stay to inquire whether to such poor it will be a "*benefit*," or to ask the medical man whether, by being paid, *he feels degraded*. For myself, I have given to the plan much of calm and quiet deliberation, and perceive it in active, useful, and *unopposed* operation in many of the provincial districts; and however strongly this measure may be opposed by some, there are not wanting from among the ranks of the profession many who think, under judicious limitations, the proposed measure may be usefully, nay, profitably, adopted; by the poor man, as a means to obtain assistance *suited to his circumstances*—by the practitioner, as obtaining *small but certain remuneration*.

And now a few words as to the interest of the medical man; and on this head I need only ask the practitioners living in the immediate neighbourhood of a dispensary, with the abuses to which it is subject, whether it is not a far more objectionable measure, and fraught with much greater danger to the interests of the private practitioners, and much more likely to take the bread out of the mouths of the poorer class of surgeons, than the formation of a Medical Club, with the "concerted measures of the Forbes's, the Beans, the Brownes, and the Flowers" of any district? I feel satisfied that had Mr. Bowen been acquainted with more than the *mere* names of those persons he has mentioned, he would never have imputed to them being actuated by such unworthy motives.

I have now only, in conclusion, to call your attention to an advertisement, in which I find that it is intended to try the effect of a good dinner upon the general practitioners of Southwark and its vicinity, to cultivate among themselves that unanimity and good feeling so essential at the present period, in consequence of the many recent attempts to *injure* and *degrade* the profession,—at which, doubtless, many good things will be both *said* and *swallowed;* and though I leave them to the enjoyment of this method of "*mutual protection*," with the cheers, the triumph, and the hollowest exultation, and though no garland flaunt around my recreant head, I shall rest contented with the homely and humble festal

board of co-operation in a good cause, and be solaced by the reeolleetion of my humble but well-meant endeavours, and in the satisfaetion arising from the possession of the "*mens conscia recti.*"

With these hurried remarks, not intending again to trouble you on this subjeet, and thanking you for your impartial conduet, I take my leave, "throwing off the mask," and avowing myself a "Camberwell Practitioner"—

J. S. Flower,
Surgeon.

Camberwell Green,
Oct. 17, 1836.

PROCEEDINGS IN CAMBERWELL.

REPLY TO MR. HULBERT.

To the Editor of the Medical Gazette.

Sir,

I readily comply with Mr. Hulbert's request; and as this matter coneerns the profession generally, and espeeially the praetitioners in this distriet, you will, I trust, give insertion to *all* my statements, as I am prepared to prove their eorreetness. I will pass over the "wigs and gold-headed canes of antiquity," and also the letter of the "Camberwell Praetitioner" (which appears to be Mr. Hulbert's chief prop), and only allude to one insinuation eontained in his letter, viz. "that I am aeting under the direction of others." Such an inuendo would excite anger in my mind, if I believed that any individual except Mr. Hulbert eould entertain the same opinion; but as it emanates from him alone, I can readily exeuse it. "Il y a des reproches qui louent, et des louanges qui medisent."

And now for my justification of the personalities I am aeeused of.

At the Camberwell meeting Mr. Hulbert made the following statement:—"I am sure I do not wish to aet in opposition to my profcssional brethren." Now, sir, from the whole tenour of Mr. H.'s proceedings, I thought that he was not actuated by this feeling; and the following circumstanees indueed me to form that opinion:—Mr. Hulbert eame into this neighbourhood a few months since, I believe, a perfeet stranger. I had the honour, on the 4th of August, to receive a circular from him, inviting the "*clerical* and medical professions, and others, to attend a meeting at the school-room in this parish, for the purpose of hearing Mr. Smith, on the subjeet of "Self-supporting Dispensaries," J. Callaway, Esq. in the chair. A very small number of these circulars, however, reached the members of the *latter* profession; and Mr. Hulbert's excuse for this omission was, "that his boy was unable to find the residences of the medical men, and therefore returned the eirculars."

This meeting was adjourned till September the 7th, when I found Mr. H. siding with men who charaeterized the members of our profession "as gross and mercenary eonspirators; who told us to read our bibles, and mark well the story of the good Samaritan; that we were only a fraction of the eommunity, and must yield to the publie good," &c. Mr. H. afterwards wrote to the Editor of the *Surrey Standard*, calling his aceount of the meeting *impartial*, when he knew that the *reporter only gave the arguments of those who were favourable to the plan.*

At a subsequent meeting, when a large body of medieal men were present, a letter was read by Mr. Hulbert's son, from Mr. Hawes, M.P., stating, "that if the medical praetitioners were eonsulted, that this Dispensary eould not be formed; but he (Mr. H.) recommended its formation without paying any regard to their opinions." After the above, I think that I was justified in descending to personalities; and, when speaking of the elubs and dispensaries, I thought it desirable that the gentlemen present should know how these things were managed in the borough of Southwark and its vicinity; and I made the following observation:—That Mrs. Hulbert was in the habit of walking about from morning till night reeommending the "Self-supporting Dispensary;" and on that very day she had ealled upon a lady in Trinity Square, and, amongst other advantages, had held out as an indueement, that the servants might beeome members." But, sir, this remark was levelled at Mr. H., *and not at the lady*, as I presumed that she aeted according to her husband's direetions.

And, lastly, to shew that the general practitioners in this neighbourhood are somewhat interested in Mr. H.'s movements, I may state that a handbill (printed in the same type and eharaeter as those issued by Messrs. Eady and Co.) has been eirculated, addressed to the industrious mechanics and working elasses of the borough of Southwark and its vicinity; the writer of whieh (after speaking *à la Rowland* "of a diseerning publie, and promising these said industrious mechanics, that, under the Divine blessing, all their ills will be removed,") offers them physic, &e. for 1d per week; male servants to pay 7s. per annum; female, 5s. do. &c.

"Persons desirous of beeoming free members may apply for information to Mr. Hulbert, 6, Trinity Square, any morn-

ing between the hours of 10 and 12, Sundays excepted"

I must apologize for having occupied so large a space in your journal, but I have, in *self-defence*, been obliged to enter into the above explanation.

Yours respectfully,

E. CRISP.

Walworth, Oct. 18, 1836.

NEW REGISTRATION OF BIRTHS AND DEATHS.

To the Editor of the Medical Gazette.

"O miseri, quæ tanta insania, cives?
Creditis avertos hostes? aut ulla putatis
Dona carere dolis Danaûm?
——equo ne credite, Teucri,
Quicquid id est, timeo Danaos, et dona ferentes."

VIRG.

SIR,

I WAS much gratified by your remarks in the GAZETTE of the 3d instant, on the "dainty device of Mr. Secretary Chadwick, and his employers, for degrading the profession into a Company of Parish Clerks." I felt persuaded that the tone and spirit of your observations would be justly appreciated by every one anxious for the interests and character of the profession.

The Poor Law Commissioners, it seems, have very generously offered to the worst-paid and hardest-worked officers of the Unions—members of a profession they have sought every opportunity to insult, injure, and degrade—the *very lucrative* and *highly dignified* office of subordinate. or district, registrar of births, deaths, and marriages, "when these duties are not inconsistent with their engagements, and they may be disposed to perform them!" Discreet, delicate, generous men, with large salaries, "small brains, and no bowels!"

Such conduct of the Commissioners, whose general treatment of the profession has deservedly excited in the minds of all its respectable members feelings of unqualified disgust, being characteristic, is not much to be wondered at; but I am surprised that your correspondent, T. G., should think it "extraordinary" that medical men have, in so many instances, refused the very *respectable* office of subordinate registrar, encumbered as it is with duties, and productive as it is of emoluments, so well suited to the taste, time, attainments, and expectations, of a parish clerk. I confidently believe that he will hear of many more instances of men, who, considering what is due to their profession, and to the cool impudence of the Somerset House triumvirate, and their scribe, will have rejected this contemptible offer.

If the medical profession is to be benefited, we may be sure it will not be at the hands of the Poor Law Commissioners, but by the united exertions of its own members; nor is it necessary for the advancement of the statistics of medicine, that medical men should accept the proffered *honour*.

It was very well known that the "bait" would be taken only by those who cherish and are charmed with the "credit" of an appointment by a Board of Guardians—Mr. Chadwick's neophytes, the "wider field officers"* of the Poor-Law Commissioners.

A correct registration of the number and causes of deaths may be effected, and all the desired advantages derivable therefrom may be obtained, by the medical profession, without a voluntary and spiritless submission on its part to more injustice and new indignities.

Let the Commissioners and the Guardians appoint their relieving officers—persons in their estimation perfectly qualified to judge of the degree of illness of paupers, and of the necessity of medical aid, or any other persons whose engagements are not incompatible with the duty, and let them procure from the friends of the deceased, in writing, under the hand of the medical attendant, a statement of the known or supposed cause of death. Any respectable scribe may transfer this to his register.

To this it must come, if accuracy be intended, appoint whom they may. A district registrar, even if a medical man, could not, unless omniscient, ascertain with the requisite precision the known or supposed cause of death without a direct or indirect appeal to such medical authority.

T. G.'s wonder, I think, should cease or abate on further consideration; for he needs not to be assured that the medical profession are fully aware of the ceaseless endeavours of the Poor-Law Commissioners to degrade general practitioners into a race of petty pedlars and parish clerks, and they, consequently, are able to appreciate their present *politeness*. The profession can, and assuredly will, afford their efficient aid in promoting the objects of the Registration Act, as far as they are, or ought to be, concerned; but they are not to be expected to seek degradation, or voluntarily suffer injustice, upon even so specious a pretext.—I am, sir,

Your constant reader,

JUSTITIA.

Camberwell, Oct. 19, 1836.

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* Vide First Annual Report of Poor-Law Commissioners.

DR. UWINS AND DR. J. JOHNSON.

To the Editor of the Medical Gazette.

SIR,

UPON mutual explanations being given, Dr. Uwins has entirely absolved me from the charge of having written the article copied from the GAZETTE into the *Times*, and, consequently, has absolved the Editor of the GAZETTE from the charge of breach of veracity. This *absolution* (grounded, however, on the charge being owing to a mutual misapprehension), was publicly given in the London Medical Society last Monday night. I have written to the *Times;* but as some delay may take place in the appearance of my letter, I request you will give these few lines a place in your next number.—I am, sir,

Your most obedient servant,

JAMES JOHNSON.

Suffolk Place,
October 19, 1836.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

October 6th, 1836.

Samuel Lees, Ashton under Lyne.
Frederick Hawthorn, Uttoxeter.
Reuben Booth, Aurington, Lancashire.
George Kidgell, Wellington, Somersetshire.
John Malborough Cowell, Faircloth, St. Stephen's.
Edward Des Forges, Hull.
Henry Adnah Bellard, Hull.
George Whittingham.
Henry Davis, Pendock, Worcestershire.
George Frederick Meadows, Woodbridge, Suffolk.
Jeffery Strudwick Johnson, Peterborough.
William White Williams, Dursley, Glostershire.
Frederick Broadhurst, Bath.

October 8th, 1836.

John Thomson, Dalton, Yorkshire.
James Harridge Ford, Rayleigh, Essex.
Francis Allday, Birmingham.
Joshua Paynter, Pembroke, S. Wales.
G. Nicholas Dangerfield, Churcham, Glosters' ire.
J. Ludford White, Stoke Golding, Leicestershire.

October 13th, 1836.

Charles Ray.
Thomas Southam Burman, Stratford-on-Avon.
Allen France, Honley, Yorkshire.
James Askey Wood, Uttoxeter, Staffordshire.
James Walford Tillett, Colchester.
Henry Weeks, Barnstaple, Devon.
R. Robinson Alderson, Everingham, Yorkshire.
William Kaye Jackson, Denby, Yorkshire.
John Thomas Dolman, York.
Hugh Birt, Storrington, Sussex.
Thomas Booth, Bradford, Yorkshire.
Adoniah Vallack, Kingsand, Plymouth.
Marc Anthony Bazille Corbin, Guernsey.
Samuel Day Fereday, Gornal, Staffordshire.

NEW MEDICAL BOOKS.

T. B. Curling on Tetanus; being the Jacksonian Prize Essay for 1834. 8vo. 8s.

Elements of the Practice of Medicine. By Dr. R. Bright and Dr. Thomas Addison. Part I. 8vo. 4s.

Guy's Hospital Reports. Vol. I. 8vo. 13s.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Oct.* 18, 1836.

Abscess	1	Heart, diseased	1
Age and Debility	21	Hooping Cough	4
Apoplexy	1	Inflammation	12
Asthma	8	Bowels & Stomach	6
Cancer	3	Lungs and Pleura	2
Childbirth	2	Insanity	6
Consumption	34	Liver, diseased	5
Constipation of the Bowels	1	Measles	10
Convulsions	17	Mortification	1
Croup	1	Paralysis	1
Dentition or Teething	1	Scrofula	3
Diarrhœa	1	Small-pox	1
Dropsy	6	Sore Throat and Quinsey	1
Dropsy on the Brain	6	Spasms	1
Epilepsy	1	Thrush	1
Fever	5	Unknown Causes	11
Fever, Scarlet	3		
Fever, Typhus	1	Casualties	5
Hæmorrhage	1		

Decrease of Burials, as compared with the preceding week . . 139

METEOROLOGICAL JOURNAL.

Oct. 1836.	THERMOMETER.	BAROMETER.
Thursday . 13	from 48 to 60	29·06 to 29 35
Friday . . 14	50 58	29 62 29 87
Saturday . 15	48 61	29·79 29 86
Sunday . . 16	40 59	30·12 30·12
Monday . . 17	48 63	30 09 30·09
Tuesday . . 18	52 63	30·07 30·05
Wednesday 19	51 59	30·09 30·29

Prevailing winds, S.W. and W. by N.,
Generally cloudy, with rain at times.
Rain fallen, ·25 of an inch.

NOTICES.

"R." 1. No law, right, or charter, would be violated. If the party did not pretend to be a *Doctor*, he would not come under the jurisdiction of the College of Physicians; if he did not dispense medicines, the Society of Apothecaries could not interfere with him. He would be *quasi* a Surgeon, and the Royal College of Lincoln's-Inn have not the power to question any one.—2. The proposed University is not to interfere with the College of Physicians, which cannot be superseded unless by a special act of Parliament,—a measure which there is no reason to suppose will be attempted, and if attempted, would certainly fail in the upper House.—3. Not till after the meeting of Parliament.—4. In the MEDICAL Gazette for Sept. 17, 1836.

We must decline the publication of Mr. Marson's letter.

CHARING CROSS HOSPITAL.—We understand that this hospital has been struck off the list of those recognised by the College of Surgeons.

The P.S. from Camberwell came too late.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 29, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture V.

On Sex, medico-legally considered—Importance of the subject: 1. Normal development—Characteristics of the Male and Female Figure—Male and Female Skeleton. 2. Abnormal development—in the Male—in the Female—where the Sexual Characters are mixed. Hermaphrodism—remarkable cases—all resolvable into Androgynous and Gynandrous varieties. Concealed Sex—some modern instances.

Sex, like Age, is a subject of wide extent and application. It not only forms an element in other medico-legal inquiries, but frequently becomes an independent question. As medical jurists you may be called upon to give evidence as to the sex of an individual—infant or adult—living or dead; nay, the sex of the fœtus may sometimes be a moot point.

It may also be necessary sometimes to identify the supposed remains—the mutilated relics, of a person long missing. It may be that only the bones are found. Here the sex requires to be clearly ascertained: we must be assured that we do not take the bones of a male for those of a female, and *vice versâ*.

Legal distinctions.—In the case of a new-born child, the determination of the sex may be of vital importance, if it be the issue of parents possessed of real or landed property: its right of succession mainly depends on its sex; and should it die, the disposal of that property, which it would have enjoyed as a male, must be arranged in accordance with the evidence of the sex. The interests of many expectant relatives may be at stake.

In reference to tenancy by the courtesy, the right of the father to possess a life interest in the real property belonging to his wife, may depend on the ascertainment of the sex of their new-born infant. For if the wife be tenant in tail male, and delivered of a son born alive, the husband's right is secured; whereas, if she have only a daughter, the husband is not entitled to be tenant by the courtesy, because such issue was excluded from succession by the nature of the tenure. This is a fact which ought to be fixed in the memory of every practitioner who happens to be present at the birth of a child belonging to persons of property; indeed, in every case it would be proper for the accoucheur to note the circumstances of the birth, particularly with regard to the sex of the infant. But I shall have occasion to revert to this subject more fully hereafter.

Again, at an age more advanced—childhood—the arrangements regarding the education and future prospects of the young person are essentially founded on an understanding of the sex: it would be a serious mistake to give (as has been done) the education of a female to one who should afterwards prove to be a male. Dr. Beck cites a case in which a physician was consulted by the relatives of a young nobleman of doubtful sex, who, if a male, would inherit a considerable estate, but to which he could have no right if he belonged to the other sex.

Now, in ordinary cases, it may seem to be a very simple affair to determine the sex—whether the subject be an infant, an adult, or merely a skeleton. But we shall see that difficulties may sometimes arise; and this not only where the sexual characteristics are abnormal, but even where they are normally developed.

1. NORMAL DEVELOPMENT.

Suppose, in the first place, that the sexual parts and other peculiarities of the male or female are normal. No difficulty, of course, will present itself to us, provided we be allowed the opportunity of personal inspection—more particularly if the subject be an adult, or have attained the age of puberty. The ordinary sexual characters of individuals at the different periods of life need not detain us.

Sex before birth.—But there are one or two cases, even in the normally developed condition, in which it may not be very possible to speak without deliberation regarding the sex. There is a period, for example, in intra-uterine life, when the sex is by no means determinable. The fœtus, up to a certain age, possesses no distinctive sexual parts: those that are observed might prove, upon further development, to belong either to the male or female. If we examine the fœtus, or embryo, as early as the fifth or sixth week after conception, we shall find that the rudiments of the genital organs have not yet made their appearance; and that it is not till somewhat later that a little tubercle becomes visible; which tubercle may prove subsequently to be either a clitoris or a penis: as yet, at all events, there are neither labia nor a scrotum. This condition holds for the first fifty-five days, according to Velpeau.

At from eight to ten weeks, the tubercle undergoes further development. Around its base there arises a fold of integument, the rudiment of the future prepuce; and a little furrow is perceived on its lower part, which soon after forms the urethra. This furrow, which remains unclosed for some time in certain fœtuses, extends to within about a line of a little prominence, —the anal tubercle: for as yet the anus is imperforate, and merely presents the appearance of a slight elevation. In short, it is probably not till about between the second and third month that any thing can be positively stated relative to the sex of the normally developed fœtus.

Sex of the new-born child.— It may happen that at a much later period—that of birth — doubts may be entertained whether the sex be ascertainable; for the testes may not yet have passed through the abdominal rings, and the scrotum may be imperfectly formed. The progress of the descent of the testes is curious. From their original situation, a little in front of the kidneys—where also the ovaries are primarily situated—they descend by about the seventh month towards the inner ring, carrying before them the fold of peritonæum, which afterwards constitutes the tunica albuginea. In the eighth, they enter the passage, and during the ninth are generally deposited in the scrotum. Upon an examination of ninety-seven infants at birth, Wrisberg found that in sixty-seven both testes had reached the scrotum; in seventeen, one or both were still in the canal; in eight, one testis, and in three, both testes still remained in the abdomen.

At later periods.—Let me now call your attention to some other cases of possible difficulty in determining the sex, although there be nothing abnormal about the proper characteristics, so far as they are developed. Suppose we have to examine a skeleton—one that probably belonged to a person not yet adult. In such a case, though we may be possessed of the elements for determining the age, the sex is by no means so well marked as to be readily distinguished. The skeletons of infants and young persons of either sex, have few or no peculiarities by which the necessary investigation may be guided. We must here call to our aid whatever external circumstances may be available for the information which we seek.

But when we have to examine what appears to be an adult skeleton, with reference to sex, there are several characters of which we may avail ourselves. Let us first take a view of the female as distinguished from the male figure.

The adult figure in both sexes. — There is, in general, more plumpness in the female form than in the male. The muscles are smaller, and less strongly marked; the integuments are more abundant, and softer; and the cellular substance is more largely provided with a supply of fat. The nails are smooth and semi-transparent, the hair of the head fine and long; and that on other parts of the body comparatively scanty.

The proportions also present some remarkable contrasts. Thus the female is usually not so tall as the male; half her length corresponds to the upper part of the symphysis pubis, while, in the man, the half is situated at the middle of the symphysis. In the female, accordingly, the lower extremities are comparatively shorter than in the male. The head is generally smaller; the lower jaw and chin less marked and prominent. The teeth, smaller and whiter, sometimes do not exceed the number of twenty-eight. The neck slender, with little or no projection of the larynx. The trunk somewhat longer, enlarged in its upper and anterior part by the prominence of the breasts, and the position of the arms, which are in closer contiguity with the sides than they are in man. The posterior aspect of the trunk presents a furrow, extending to the sacrum; while the la-

teral parts usually exhibit a depression on either side, from the ribs to the hips, peculiar to the female, more especially as modified by the civilization of the present day. The chest of the female has a larger antero-posterior diameter than that of man; but a smaller bi-costal or transverse diameter. The hips and upper part of the thighs comparatively more round and extended; the knees are more inclined inwards; the leg is shorter, and the foot more small and delicate. The shoulders are narrower than the hips; while the reverse holds in well-formed men. The arm and fore-arm are more round, but less marked, than in the male; the hand is smaller, and the fingers more tapering.

Bones of either sex. — With regard to the osseous structure, it may be observed that there are some very striking peculiarities belonging to the bones of the female; they are less firm, and lighter than those of man. The flat bones are thinner, and the short ones more cellular or spongy; the long bones are more smooth and tapering, nor are there perceived on them those rough lines or ridges, which result from the repeated and more powerful action of the muscles in the male. The apophyses, which afford attachments to the muscles and ligaments, are but feebly marked: the joints are generally less large, but more flexible, than in the male. The ligaments and cartilages are more pliant, and continue so for a longer period. And, in short, we every where discover in the general structure traces of a more delicate conformation.

Male and female skeleton.—But to come more particularly to the parts of the skeleton:—The cranium of woman is smaller, more oblong, and less depressed on the sides than that of man; the face more oval; the frontal sinuses less developed; the nasal apertures smaller; the jaws, with the alveolar arches, are shorter and more elliptical; and the chin is not usually prominent.

The shape of the chest has been already noticed; but it may be added, that the sternum is shorter and more convex; the xyphoid cartilage is thinner and more flexible, and remains unossified for a longer time than in the male. The ribs are also more delicate and uniform; the cartilages which join them to the sternum are longer and more elastic, and their dorsal articulation less compact: thus the female chest is comparatively more largely endowed with the power of expansion and contraction than the male.

The pelvis.—Both the shape and size of the pelvis are remarkable. Here are representations of the male and female pelvis, showing the distinctive characters.

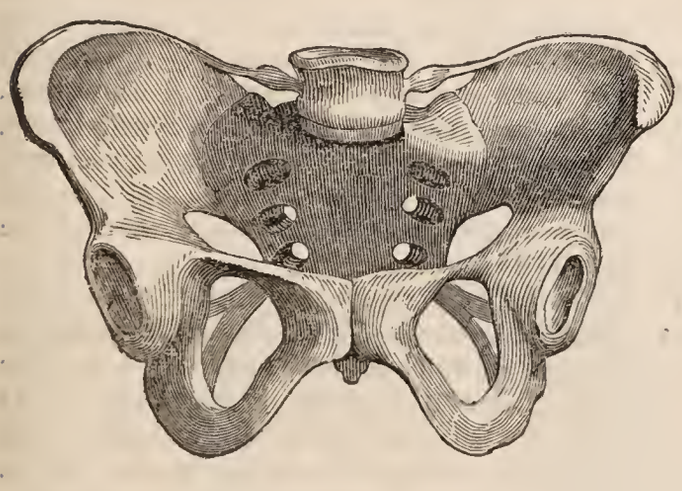


FIG. 6.—*Female pelvis.*

FIG. 7.—*Male pelvis.*

The ossa ilia in the female (fig. 6), it will be observed, are more spread out, or verging to the horizon, than in the male. The sacrum is more capacious and concave; the pubis less elevated, and its ascending branches forming a less acute angle; the ossa ischia wider apart; the subpubic foramina larger, more oblique, and approaching a triangular shape. The various symphyses of the pelvic bones are less compact than in the male, and allow more motion. The following are the diameters of a well-formed, we may call it a *standard*, female pelvis: it may be observed, by the way, that they are considerably larger than those of the male:—Of the inlet, the antero-posterior diameter measures 4 in. 4 lin. English; the transverse, 5 in. 5 lin.; and the oblique, 5 in. Of the outlet, the antero-posterior diameter measures about 5 in.; and the transverse, 4 in. 4 lin.

The cotyloid cavities of the female pelvis are more distant from each other than those of the male, giving rise to a remarkable difference in the position and appearance of the femurs; these bones being in woman much more oblique from without inwards than in man. The neck of the thigh-bone is more transverse, and the trochanters more apart, than in man. The inner condyle, also, is

larger, and a little longer, than the exterior, which gives rather a peculiar aspect to the female knee.

The chest, as seen from behind, is narrower and less convex in the female than in the male; it is shorter, also, so that there is a greater space between the ribs and the crest of the ilium.

In fine, the vertebral column is more flexible, and somewhat longer, comparatively, than in man. The vertebræ are less compact; the spinous processes less prominent; the transverse more turned backward. The body, or anterior portion of the vertebræ appears (to Soemmering) to have more height; but at all events the intervertebral cartilages, especially in the lumbar region, are thicker, softer, and every way larger, during pregnancy.

Illustrative case.—By way of illustration of the remarks just made, I may refer to a case hereafter to be more fully noticed. A parcel of bones, forming a skeleton, having been disinterred a year or two since in Paris, one of the first questions which the medico-legal examiners proceeded to solve was, whether these were the bones of a male or a female? I quote from the *Annales d'Hygiène* (tome xi. 137) that part of the official report relating to this subject:—"The bones are small and delicate; those of the extremities not at all curved by muscular motion: the marks of the insertion of the muscles are few and faint. The cranium is small, and oblong from front to rear. The ossa innominata are largely spread out; the cavity of the pelvis not deep; the anterior of the sacrum concave; the subpubic holes triangular; the cotyloid cavities wide asunder: finally, the upper strait of the pelvis presents exactly the diameters usually found in well-shaped females. So that, putting all these characters together, there cannot be a doubt but that this is the skeleton of a woman."

II. ABNORMAL DEVELOPMENT.

We have next to consider how the sex may be determined in persons who have an abnormal development of the generative organs. Here we may have considerable difficulties to contend with in our inquiries, especially if the individual be living, as we are thereby in great measure precluded from an internal examination. Sometimes the male organs may be so formed as to simulate at first view those of the female: the female organs, again, may have such a conformation as to mislead a superficial observer, and induce him to believe them male. But this is not all: there may be an actual mixture of the male and female organs in the same person, giving rise to the supposition of hermaphrodism. We shall consider these varieties in order.

1. *Abnormal development of the male.*—Some men have the orifice of the urethra opening, not at the usual place—at the extremity of the glans—but somewhere beneath it,—perhaps as low down as the root of the penis. Such persons are called Hypospadians (Ὑποσπαδιαι,—imperfect beings, σπάδωνες, with the orifice, ὑπο, *beneath*); and their true sex is apt to be confounded owing to this additional circumstance:—in some of them, the penis being wholly imperforate, resembles an enlarged clitoris; and in such cases it commonly happens that the orifice of the urethra being beneath, the scrotum is divided, forming two distinct sacs, with a testicle in each, thus presenting the appearance of enlarged labia. Suppose, now, in a person of such a conformation, that the testes have not descended or emerged from the abdominal rings (as happens in some men), and let the penis be diminutive, it will be easily understood how striking may be the resemblance to the female organs.

When the orifice of the urethra happens to be any where *above* the usual place, either on the glans or on the dorsum, or even the abdomen, the person so formed is termed an Epispadian (Επισπαδιὰς, the peculiarity being ἐπι, *above*). I mention this variety of conformation, however, at present, merely for the sake of contrast. Epispadia is not a peculiarity which can tend to render the sex very ambiguous, though, like Hypospadia, it materially interferes with the generative function. Of both, in reference to this circumstance, I shall have occasion to speak in a subsequent lecture, when I shall also notice some other malformations of the male genital organs.

Persons in whom the testes have been atrophied or wasted away, sometimes present the external characters of the female, though belonging decidedly to the male sex. Sir Everard Home tells us of an idiot boy, aged 13, who had no penis, but in its stead a prepuce of small dimensions, beneath which was observed the orifice of the urethra. In the scrotum, which had no raphé, were found two very small testes, not larger than those of a fœtus. The mons veneris was very plump. Vagina there was none; but the whole body was exceedingly fat, and the breasts were as large as those of a bulky woman.

A very remarkable and well-authenticated case was published some years ago in a French periodical (*Bull. de la Faculté de Paris*, No. X.) In the year 1792, an infant newly born was registered and baptized as a female, by the name of Marie-Marguerite. On attaining the age of puberty, two small tumors made their

appearance at the inguinal rings, and being mistaken for hernia, it was attempted to repress them by trussing; but all in vain—they came down into the labia. At the age of 19, Marie-Marguerite was about to be married, when it was thought advisable first to examine those tumors, lest they might prove any impediment to matrimony. All this time nothing more than a mere hernial affection was suspected. What, then, was the surprise of all parties when the professional examiner, Dr. Worbe, pronounced Marie-Marguerite to be a man!

Among the reasons assigned by the Doctor for such a conclusion, it is mentioned that there was something masculine in the shape, stature, and voice of the individual, as well as about the hands and feet. The breasts, however, were in some degree developed like those of a female. As to the parts of generation, there was nothing external to indicate that they were those of a male. But upon examining the labia, or what were considered as such, the testes could be felt in a manner admitting of no mistake. There was nothing very remarkable about the size or situation of the supposed clitoris: there was, however, no vagina, for what at first appeared to be that passage, was found to terminate at the depth of about an inch and a half in the orifice of the urethra. It was, in fact, a well-defined case of hypospadia.

M. Dupuytren (*Leçons orales*) knew an extraordinary instance of this kind. A person affected with hypospadia was married for fifteen or twenty years, and during all that time was treated as a female. Sexual intercourse was regularly effected by the canal of the urethra; nor was it until the period just mentioned had elapsed that it was discovered—the individual was a man!

About two years ago I saw a person of this description—one Gottlich, a German, who came to exhibit himself to the faculty in London. He had little more of a penis than the glans, and the scrotum was divided so as to resemble labia: there was, however, a testicle on each side; and the general appearance was much more that of a man than of a woman. He was about 35 years of age, and pretended to have strong sexual propensities—*for the male**.

2. *Abnormal development of the female.*—We have next to consider what are the circumstances and external characters of structure which may render a female liable to be confounded with the male sex.

In the first place, the clitoris may be excessive in its dimensions, when it will resemble an imperforate penis.

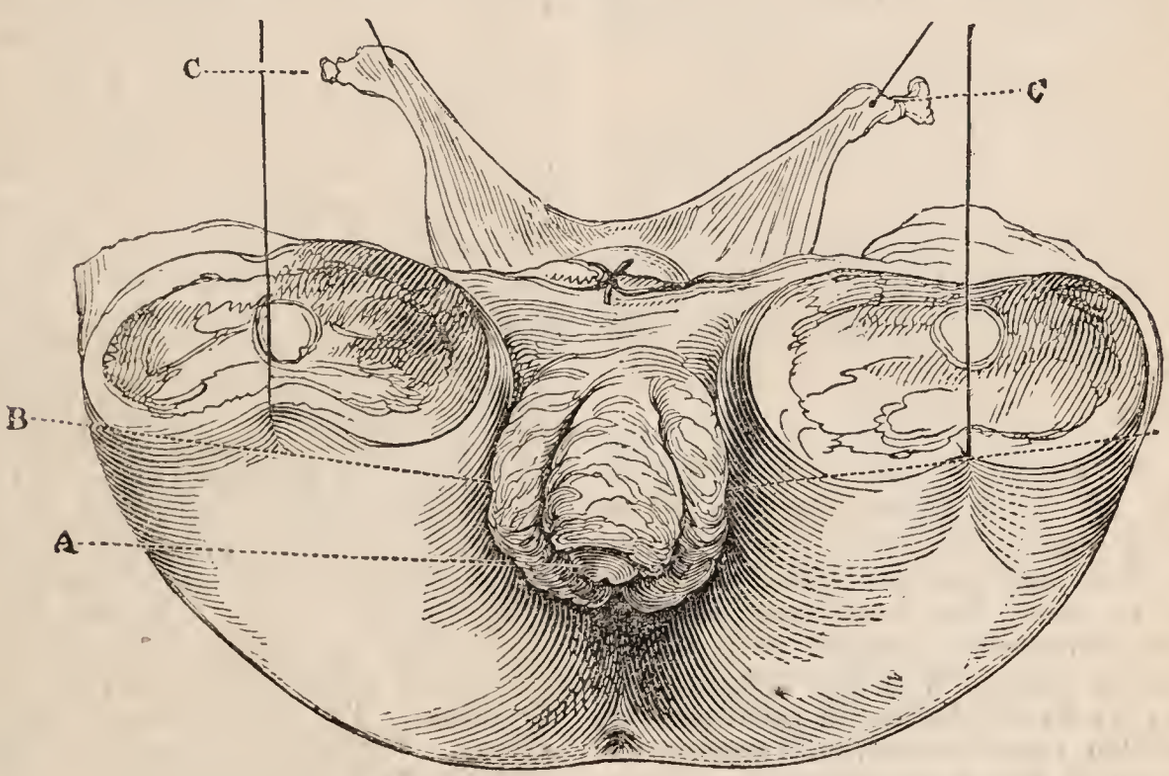


FIG. 8.—*Abnormal Sexual Development in a Female Infant.*

Here is the representation of an enlarged clitoris in a child that lived many weeks. It was not till after death that the mistake was discovered: the infant having been baptized as a boy. The uterus (C C), by which the preparation is partly suspended, serves to show the sex. The clitoris (A) bears a close resemblance to the penis of a male child of the same age, except that the prepuce does not completely cover the glans. At the extremity of the glans there is a sul-

* An account of this person, with an engraving, is given in the Edinburgh Medical and Surgical Journal for 1835, vol. xliii.

cus, but it terminates in a *cul-de-sac*, and does not form the entrance of the urethra*.

In the next place, the general appearance of the person may be more or less masculine; as in a case observed by Beelard, where the resemblance in structure went so far as that the urethra ran for some distance along the lower surface of the clitoris; rather a rare variety. This person, however, (her name was Marie-Madeleine Lefort) had a decided vagina, menstruated, and moreover had the sexual desires of a female.

In cases where females labour under that distressing malformation, exstrophia (ἐξ and στρεφειν)—the bladder *turned outwards*, opening, in fact, on the abdomen, or at least above the symphysis pubis—the cervix uteri may be thrust forward out of the vulva, and present the appearance of a male organ. A portion of the intestine also has been known, under the same circumstances, to protrude above the pubis, and to put on a similar appearance.

A prolapsed uterus, congenital or accidental, may sometimes simulate the male organ. This was the case with a French woman, who exhibited herself and pretended so be as much a man as a woman; but Saviard succeeded in restoring the womb to its place. Sir Everard Home mentions an instance of the protruded cervix, in which the investing membrane, from long exposure to the air, had assumed the external character of the penis.

3. *Mixture of the male and female organs.*—But beside the malformation in either sex, just now described, there are undoubted instances on record of the parts of the two sexes being in some measure mixed, in one and the same individual. These are the cases which serve to support the vulgar notion of

Hermaphrodites.

Such a being, however, as a true hermaphrodite — that is to say, a person capable of impregnating and of being impregnated — has never yet been discovered among the human race. Whenever there is found a combination of this sort in an individual of our species, it generally happens that the organs of neither sex are complete—that the person is unprolific; at all events, that at least one set of the sexual apparatus is wholly inert.

There is a case narrated by Maret, in the Mem. de l'Acad. de Dijon, tome ii., which has been much quoted—it is that of Hubert-Jean Pierre, a person aged seventeen, who was female in the upper part of the body, and male in the lower; female, again, on the right side, and male on the left: yet, after all, was neither perfectly male nor female.

But in general there will be found to be more or less of the predominance of one sex. If the male characteristics are more strongly marked than those of the female, the individual is termed *androgynous*: if the reverse, *gynandrous*. And I believe it will be found that all the well-authenticated cases on record may be reduced to one or other of these varieties.

Professor Mayer, of Bonn, has lately had the opportunity of solving a problem which interested the physiologists of Europe for upwards of thirty years. He has removed the veil which so long hung over the mysterious case of the "hermaphrodite Durrge," or *Derrier*. This person was a Prussian, was christened as a female, but considerable doubts about her real sex were entertained after having reached the period of puberty. Durrgè travelled a good deal between the age of twenty and forty, and was inspected by most of the *savans* in Germany, France, and England. Opinions were greatly divided. Hufeland pronounced the prevailing sexual character to be feminine; Osiander considered it to be male; while Gall affirmed that it was decidedly feminine. "The so-named Carl Derrier," said Gall, "ought, if called after his sex, to be named Caroline Derrier. The structure of the head is that of a woman, long from before backward; the forehead low and small. Although he is now thirty-seven years old, [this was in 1817,] he has no beard, and his voice is that of an elderly woman. His larynx is small; the arms and knees are bent inwards, as in the female sex; the breasts are larger, in proportion to his size, than would be consistent with the development of a man. The hips are those of a woman: in short, the structure and proportion of the whole body bespeak the woman. The enlarged clitoris is not placed over a scrotum, so that it cannot be called the penis of a man; it is placed rather between the labia, as in the female organs. . . . . The organ which he possesses does not, as in man, arise behind the arch of the pubis, which alone would serve to show that he is not a *hypospadian*, as the Parisian faculty have supposed. Whether or not he possesses a womb, cannot be decided till after death."

Durrgè was an ingenious person: he had learnt the art of modelling in wax, and executed several excellent specimens for different museums. In his fortieth year (1820), he settled at Bonn, where he obtained the appointment of wax-modeller and inspector to the anatomical Museum. He died of apoplexy, in March, 1835, being then 55 years old.

* Ramsbotham; Medical Gaz. vol. xiii. 184.

For the last fifteen years of his life, he had been under the immediate observation of Professor Mayer; so that this gentleman had ample opportunity of noting both the moral and physical peculiarities of the case. From the account given by the Professor, in the *Wochenschrift für die gesammte Heilkunde*, of Berlin *, I shall make a few extracts.

"He always carried himself as a man, probably through vanity; and showed an inclination to females, but without any decided impulse which would make his prevailing sex more certain. His character was a mixture of manly and womanish qualities. For his small growth, he possessed unusual courage and muscular strength; he exhibited also a good deal of mechanical dexterity. His voice, though it grew stronger and deeper with age, was but shrill and weak; his beard grew sparingly, and all his hair fell off, excepting a few long ones on the back of his head. His head and countenance were those of an old woman, and with these corresponded the want of teeth, the short neck, the breast, so abundantly supplied with fat, and the position of the arms and feet. In his twentieth year there was a discharge of blood from the genital organs, repeated three times. Since then there had been no trace of it, but he has frequently had discharge of blood from the nose. * * * * His body was fully developed in his thirteenth year: he was five feet in height. * * * In his thirty-eighth year he became fat, and his voice grew stronger and deeper. He was generally healthy and active. But in the last three years of his life, his memory, which had been always very good, failed him: he became altered, and gave up his wax embossing. His death occurred rather suddenly."

I shall pass over most of the details of the anatomical inspection: but some passages relating to the genital organs in particular, cannot be omitted. "The mons veneris is slightly arched, and but scantily provided with hair. The length of the penis to the corona glandis is two inches: the glans measures nine lines. The corpora cavernosa are moderately developed, being eight lines in perpendicular diameter, and four transverse; separated, too, by a septum. But there is no corpus spongiosum. The urethra, constituting a sort of semi-canal by folds continued from the labia, at its commencement about the root of the penis, is surrounded by the prostate gland, which body is decidedly firm, though not very thick. The length of the vagina is two inches and eight lines; its width anteriorly ten lines, and posteriorly six. It terminates in a sort of spongy tissue, from four to six lines in length, which is, in fact, the closed orifice of the uterus. This organ, though lying between the bladder and rectum, is rather turned towards the left side; it measures two inches three lines in length, but is very narrow in proportion. The cervix and fundus may be distinguished. The cavity of the uterus very small, scarcely admitting a large quill, widening, however, towards the fundus. Both the fallopian tubes open regularly into the womb—the left an inch shorter than the right: their canal very narrow, but perfect. Upon the right side, close to the abdominal end of the fallopian tube, there is a small flat oval body, about the size of an almond, and corresponding in structure to a testicle. On the left side, however, a small body similarly placed, exhibited traces of the texture of an ovary."

The Professor's opinion, in conclusion, is, that this was an instance of a mixture of the sexes—"that there was a union of the male and female characteristics in the development of the individual. The principal male peculiarities in Durrgè were the withered testicle, the penis, and the prostate gland; while on the other hand, the uterus, the vagina, the fallopian tubes, and the ovarium-like body found on the left side, all bespeak the woman."

M. Bouillaud's case.—About three years ago M. Bouillaud read before the Paris Academy of Medicine a curious account of what he called "a new and singular variety of hermaphrodism." It was the case of an individual who died of cholera in La Pitié, and whose body, on examination after death, exhibited very anomalous appearances. Nothing more was known of the person but that he was a *widower*, 62 years of age, a dram-drinker, a hatter by trade, and Valmont by name. He had no relations or friends, nor could anything be gathered as to his habits of life, propensities, manners, or intellectual capacity: "as if nature," says M. Bouillaud, "were in some sort ashamed to reveal the mystery of so strange an aberration."

The condition of the genital organs will be readily understood from the figures here displayed. But first let us describe the exterior. In the region of the sexual parts there was a penis of moderate size, terminated by a well-formed glans and prepuce. The opening, however, of the urethra was not exactly at the summit, but a little below the usual situation. The scrotum small, commencing as high up as the prepuce, and divided symmetrically by a raphé; but no testicles contained within. The mons veneris was rather round and plump. In the pelvis were two ovaries (11 and 12, fig. 9.),

* See also MEDICAL GAZ. vol. xviii. p. 217.

Fig. 9.

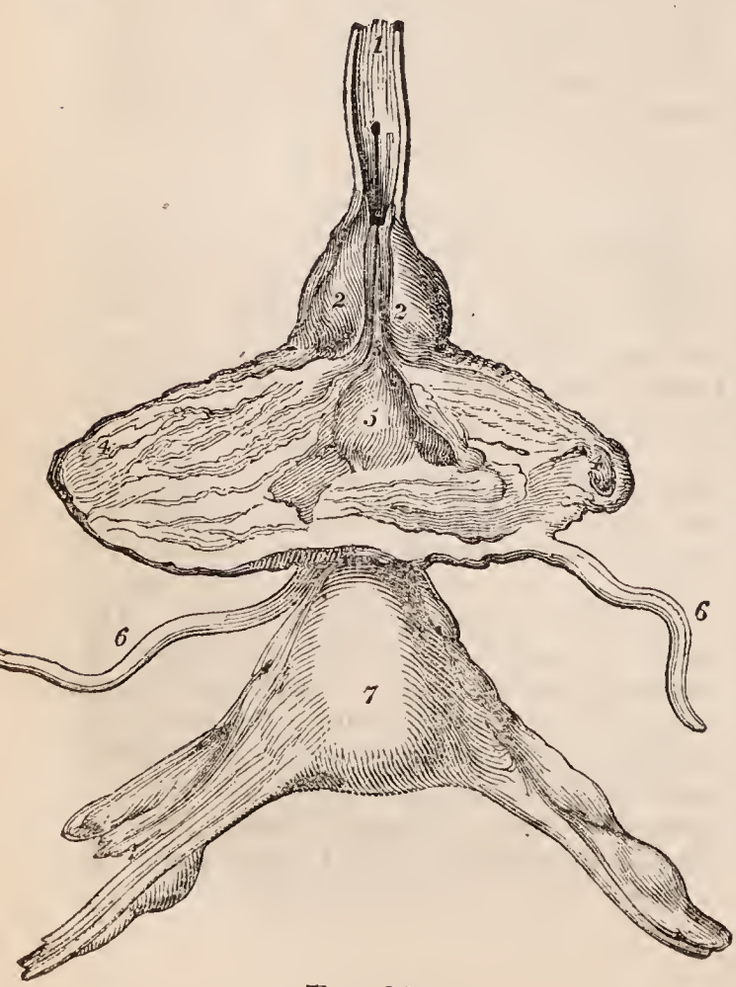


Fig. 10.

similar to those of a girl of fifteen or sixteen years of age. M. Bouillaud, however, contends that the texture of these bodies was intermediate between that of ovaries and testicles—rather fibrous than vesicular. The uterus (10) in its usual place, opening into a vagina (8), about two inches long; this passage contracts (15) about the neck of the bladder, and runs into the urethra. A regularly-formed prostate gland (2, 2, in fig. 10) is observed about the commencement of the urethra. No ejaculatory ducts could be observed; and, like the testicles, the vesiculæ seminales and vasa deferentia are wanting. "No external female organs."

Other characteristics noted in this remarkable person were, that the stature was short, the body plump, the hands and feet small, the pelvis shallow, and wider than is usual in man; the mammary glands much developed, and the nipple of the common size in healthy females.

M. Bouillaud thinks that this individual was a sort of *mezzo-termine*, or *juste milieu*, between man and woman,—a real hermaphrodite, however incomplete. But I should be strongly disposed to differ from him—the female organs being so very predominant throughout, and those attributable to the male so very open to question. In fact, with the exception of the doubtful testes, and the prostate (which some recent anatomists do not consider as exclusively peculiar to the male), all the rest were the parts of a female abnormally developed, or of a *gynandrous* individual. If we only imagine the clitoris large, the urethra carried along it to the glans, and the labia closed by a raphé, we come very near a similar conformation. I have mentioned the case, however, under the head of mixed development, partly through deference to the authority of M. Bouillaud, and partly because the external appearances were so equivocal; for Valmont, during life, must have greatly puzzled a medical jurist, had he been submitted for personal inspection.

Dr. Handy's case.—There is not, perhaps, any case on record, more nearly approaching the state of genuine hermaphrodism, than that described by Dr. Handy, in the New York Medical Repository. This gentleman saw, at Lisbon, a person twenty-eight years of age, of a masculine and dark aspect, furnished with some beard, but having the larynx, voice, and manners of a woman. The external genital organs of *both* sexes were present. Those of the male were well proportioned, and apparently complete, with the exception of the urethra, which seemed to terminate at about a third of its length. The female organs were well formed, save that the labia seemed smaller than natural. The thighs were not large: nor were the hips broad. This person menstruated regularly, and

was twice with child, miscarrying on both occasions — once in the third, and the second time in the fifth month.

It would have been well in this case to have ascertained, had there been an opportunity, the condition of the *internal* genital organs. Externally, nature seems to have gone to the furthest limit which she ever allows herself in varying the structure of the human being; and had we merely been permitted a casual inspection, without a history of the person, particularly with reference to the menstrual function and the pregnancies, we might probably have been much at a loss in giving an opinion.

Practical rules.—This suggests the importance of having some practical rules whereby we may be guided in our investigation of such cases.

When the person to be examined is merely a hypospadian, or has the male organs malformed in the superficial resemblance of those of the female,—also where the individual presents an enlarged clitoris, or other malformation of the female at first sight simulating the male parts,—in such cases there cannot be a great deal of difficulty if we only use ordinary care in making our inspection. But when the organs are obviously mixed, much embarrassment may be experienced. The following are the practical precepts given by M. Marc, and recommended by Orfila:—

1. The examination of all the external organs must be performed with exactitude and caution: every opening is to be sounded, to ascertain its depth and direction—taking care to use no force.

2. The whole exterior of the body must be inspected, with a view to determine the prevailing character, and hence the probable sex. This, however, will often require time: we cannot immediately become acquainted with the tastes, habits, and propensities of the individual under examination; and care must be taken in this respect not to confound the habits which may have originated in the artificial position held by the party in society for those that result from organic structure or development.

3. Ascertain whether from any opening, especially about the sexual parts, there be any *periodical* sexual discharge,—a circumstance of great importance, and which will be of itself almost decisive as to the feminine nature of the person examined.

4. When the individual submitted to our scrutiny is very young—suppose a new-born child with irregular sexual organs—nothing is more likely to mislead than precipitation. We must avoid haste by all means. Perhaps the utmost we can, or ought to do, in the first instance, would be to give a formal notice of the dubious nature of the case, and to take time—years, if necessary, in order to be able to observe the progressive development of the physical and moral characteristics: this we should deliberately do, rather than hazard any opinion which subsequent facts may stultify.

5. No attention ought to be paid to the declarations of the individual himself, or of persons who have ties of relationship with him: at all events it will be necessary to weigh well such declarations, in order that we may form a correct judgment of the possible motives by which they may be dictated.

Legal distinction respecting hermaphrodites.—Let it not be supposed for a moment that the subject of hermaphrodites is one of merely physiological interest, or of only a speculative value to the medical jurist. As medical men professing to be acquainted with the proper objects of Forensic medicine, we may be called on in the courts, civil or ecclesiastical, to give our opinion regarding the true sex of a reputed *hermaphrodite*. The law, in fact, recognises the existence of such beings, and it is expressly stated by the highest legal authority (Coke, Littleton),—"An *hermaphrodite*, which is also called *androgynus*, shall be heire, either as male or female, according to that kind of the sexe which doth prevaile. *Hermaphrodita tam musculo quam feminæ comparatur, secundum prevalescentiam sexûs incalescentis.* And accordingly it ought to be baptized."

Such is the view taken by lawyers of the subject: but we see how far from being satisfactory it is; "according to the sexe that doth prevaile;"—why this is the very point at issue—it comprehends the whole matter of inquiry, leaving it abundantly open to the discussion of the medical jurist.

CONCEALED SEX.

I have given several instances, in the course of this lecture, of the sex being *mistaken* — particularly in the cases of Derrier, Marie-Marguerite, and others. I should leave the subject incomplete were I to omit noticing that there are instances also in which the medical jurist may have to consider the question of *concealed* sex. But a very few words will suffice for the purpose. There can be no difficulty when the examiner has a fair opportunity of making the requisite inspection. Almost all the extraordinary examples of concealed sex on record, have been cases in which a personal examination has been carefully avoided. The person named Lavinia Edwards, a man of abominable character, who, for some years, used to dress as a female, is said to have deceived

several who were in the habit of seeing him; nor was the real state of the case ascertained till after his death. At the coroner's inquest on the body (in January, 1833), some of the most revolting disclosures took place.

Some curious instances of female sailors —young women putting on male attire, going to sea, and remaining for months undiscovered by their messmates, have of late excited a good deal of public attention. There have been also some extraordinary cases of women-husbands. In Jan. 1829, there was an inquest held in one of the Borough hospitals, on a person of the name of James Allen, aged 42, a sawyer, who was killed by accident while at work. This person was a well-formed female, and had been married for twenty-one years. The wife gave evidence at the inquest; she was an industrious hard-working woman, deplored greatly the loss of her husband, and protested that she was not aware of his being of the same sex as herself—though she had her *suspicions* of his virility.

The Chevalier d'Eon was another remarkable example of concealed sex. He had changed from male to female, and from female to male attire, several times during his life, and maintained a high degree of respectability in both characters. Bets to a large amount were laid as to his real sex, and even lawsuits were instituted upon the issue. It was not till his death, which happened in 1810, at the age of 82, that the mystery was revealed: it was then ascertained that the Chevalier was really a man, and not distinguished by any hermaphroditical peculiarity. I have lately seen an excellent portrait of him in female attire; he had handsome features, and made a very good subject for the artist.

You will find in the Tatler, No. 226, a very amusing account of a *Doctor* Young, who practised physic about the beginning of the last century, in London. The Doctor was a woman who dressed as a man; was twice married and had children, himself and his wife being occasionally confined about the same time. The paper is attributed to Addison, and has all the air of being an authentic narrative.

But in all these instances there have been secrecy, and more or less of mystery. The first step of the medical jurist would, of course, be to remove obstructions to the right comprehending of the matter in question; and probably this is all that would be required. Should there be any ambiguity in the case, arising from sexual malformation, or mixture of the essential characters, it would then be necessary to apply the principles already laid down.

MEDICAL PROBLEMS.

By D. Griffin, M.D.

HOW ARE WE TO DISTINGUISH SYMPTOMATIC FROM IDIOPATHIC INTERMITTENT?

[Concluded from p. 108.]

It seems evident, that nothing but a very clear understanding of the real nature of the affection, and that at an early period of the illness, would have saved the patient in the first of these cases. It may perhaps appear that at the time the abscess was first opened, the trephine ought to have been used, and a more free opening given to the matter; but, independent of objections on anatomical grounds, arising from a consideration of the parts among which the suppurating portion of the brain was situated, it must be remembered that the bone had become carious. The matter had worked its way through it, and on opening the abscess had flowed out freely with all the relief that could be expected from any operation.

In the third case, if the woman had been largely bled on the first moment of her applying at the dispensary, and other active measures adopted, the suppuration of the parts would perhaps have been prevented. When I saw her on her bed, and ascertained the real nature of the attack a few days afterwards, I believe that to a certain extent it had already taken place, and that all remedies were useless. My brother mentioned to me that he visited a boy similarly affected. He found him in a chair, hanging over the fire, with his head resting on his hand; he had a dull, depressed look; the iris was sluggish in its movements, and somewhat dilated, and he complained of dreadful headache, which had commenced by pain in the ear a few days before. He was immediately bled and leeched, got saline purgatives with tartarized antimony, and had his head shaved and blistered. He nevertheless went on from bad to worse, and died in eight or ten days, like the others, comatose and paralytic.

With regard to the diagnosis, as it refers to intermittents, more may generally be gained by taking notice whe-

ther the symptoms correspond in every particular with the apparent disease, than by other means. Thus, for instance, if it is observed that the paroxysms are in any degree irregular, it will lead to suspicion, because the irregular and complicated intermittents are not so numerous as those in which the paroxysms return at regular periods. If there be, besides this, a fixed pain in any part of the head, with restlessness, want of sleep, complete loss of appetite, and constant whiteness of tongue, it becomes still more probable, however perfect the remissions, that the symptoms are dependent on disease within the head; and if with these circumstances there is observed such a state of countenance as we have described, the nature of the case can no longer admit of question.

There were two very remarkable circumstances in these cases; one of them I have partially alluded to, and the other I have until now omitted to notice. The first was the close resemblance the paroxysms which occurred in them bore to those of regular intermittent, and the second, their having been relieved by the bark and sulphate of quinine. With regard to the former of these circumstances, it is necessary to mention, that the paroxysms came on for some time in both of the cases with considerable regularity. There was also a great likeness in the circumstances of the paroxysm; each fit was not merely an attack of shivering rigor, such as occurs commonly as a symptom of the formation of matter in internal parts, and which goes off after a few minutes; each attack was begun by a long-continued and severe rigor, which was followed by a regular hot stage that lasted some time, and ended in profuse perspiration, bringing with it for the time all the relief that would have occurred in regular intermittent; and this is another circumstance in which the resemblance to these diseases was extremely striking. The intermission was usually as perfect as it would have been in any one of them. The face was pale, the pulse calm, the thirst gone. The patient complained but little, and the only point on which they seemed to differ was that the patients could get but little sleep, and that when once the rigors had completely set in, the appetite never returned in the intervals.

It appears difficult to account for this great resemblance between two affections that are in other respects so dissimilar, but the difficulty will not perhaps continue, if we pay attention to the following circumstances:—

When the symptoms of diseases, which are very different in their nature, bear any resemblance to each other, it sometimes happens, from the great difference there is in the diseases which produce them, that the symptoms themselves are supposed to be also in their nature dissimilar. We are apt to associate them with the causes from which we think they arise, and to imagine a difference in the former, because there is one in the latter. This association, however, is very mischievous in medical practice, and we should ever be watchful not to be misled by it. In a science surrounded with so much obscurity as that of medicine, it ought to be our constant effort to form habits of analyzing the process by which we have arrived at the opinions we find ourselves to hold; to observe whether they are founded in reason or probability, and to be ever on our guard against that not unnatural, but most delusive principle of assimilation, which makes us jump at conclusions almost without our consciousness, and which, in circumstances like these especially, has a strong tendency to lead us astray. We ought, in short, always to take care to distinguish the symptoms which are the facts of the case from the causes of them, which are almost always matter of opinion that may be well or ill founded, and remember that the causes being unlike does not necessarily make the symptoms different. The contrary conclusion, if adopted, would tend to puzzle us in the commonest cases, and would make the consideration of all obscure ones exceedingly difficult; but more than all this, it is not borne out by facts. For independent of the proofs of this that might be drawn from a consideration of other affections, intermittent fever itself is seen in connexion with a variety of causes, and though the influence of marsh affluvia is perhaps the most frequent one, it often occurs in situations where the existence of this agent cannot even be suspected: they are said to be produced by sympathy and by contagion. "Two children," says Mr. John Hunter, "had an ague from worms, which was not in the least relieved by the bark, but by destroying

the worms they were cured." "We have in like manner," he says, "agues from many diseases of particular parts, more especially from the liver and spleen, and from an induration of the mesenteric glands." One of the continental writers gives an instance of an intermittent produced by repelled herpes, and another of one which was produced by suppressed lochia.

But these paroxysms are capable of being produced by other causes also. The application of caustic to strictures in the urethra, it is well known, has frequently brought them on, and in some cases even with the utmost severity. I remember Mr. Kirby's speaking of a case in which he made use of caustic, in which its application was followed by paroxysms so severe and intractable, that the patient lost his life by it. Mr. Kirby was never an advocate for the use of caustic in such cases afterwards, which, though from motives different from his, seems to have been since almost entirely abandoned.

Now since no difference can be shown in any thing but the cause of these paroxysms, it is perhaps too much to assume that they are of a different nature in all these distinct cases. Indeed, when we consider the number of agents which are capable of producing them, it is obvious that the immediate cause of these paroxysms lies not in any particular organic lesion, but has its origin in some disturbance of the nervous system, and in the nature of the laws which govern it both in health and disease. It seems probable, too, that the action of the (so-called) remote causes, consists in producing the peculiar state of that system which is always present with these paroxysms, and the existence of which is indicated by them; and that the paroxysms themselves have no more connexion with marsh miasmata, than they have with any of the other causes which occasionally give rise to them, or than any one symptom of any disease has with the remote cause which produced such disease. This conjecture as to the identity of the state which exists in diseases so very different in connexion with these paroxysms, seems to be confirmed by the fact of their having been benefited by the bark. The reason why the effect of the bark could not be permanent is evident.

We frequently see it mentioned in medical writings, that the shiverings from internal suppuration have often been mistaken for those of intermittent fever, and treated accordingly; but surely it would have been more practical, as they are sometimes capable of imitating them so perfectly, to point out to us some means of making the distinction.

The suppression of the paroxysms in our two first cases, by quinine, while the disease which occasioned them went on to a termination uninfluenced by the remedy, shows that the paroxysm was merely a symptom, and not even an essential symptom of the disease; it is of consequence, then (and this conclusion may be regarded as of general application), in drawing inferences from the subdual of symptoms by any remedy, to consider whether such symptoms are essential or not, whether they are sympathetic affections which might exist without the local disease, or with a very dissimilar one, or whether they are necessary and inevitable attendants on it; which arise, and live and die with it. I remember a case in which a long-continued and obstinate pain in the head, after having been relieved by solution of arsenic, was followed by hemiplegia; another was related to me, in which, after violent hectic with harassing cough was allayed by quinine, an extensive tubercular cavity appeared in the lungs after death; and a third, in which a similar cough, after being perfectly appeased by quinine, henbane, and cicuta, was succeeded by hæmoptysis.

The great mistake we are apt to make about intermittent fever, is in the disposition to regard it as an idiopathic disease, rather than as a symptom; yet, as the former, we meet with it very seldom in ague districts, while, as the latter, it falls under our notice every day. It is met with in the form of hectic fever; it is met with from irritation in the urethra; it is met with in spinal irritation, in hysteria, and as an attendant upon abscesses in the viscera. *It is, in fact, symptomatic of various diseased conditions, and bears the same relation to idiopathic intermittent that symptomatic inflammatory fever does to the idiopathic continued fever.* The former may arise from local inflammation, from disordered bowels, from worms, from nervous irritation, &c. The latter is almost always produced by marsh miasma, or contagion.

In conclusion, I may remark that the diagnosis of diseased conditions of the system, indicated by paroxysms of intermittent fever, deserves more consideration than those who have not fallen upon such cases as I have related, are likely to bestow upon it. A close study of it, with all its doubts and difficulties, can alone prevent us from confounding a very treacherous and fatal disease with one that, in these countries at least, is seldom attended with danger. If the experienced practitioner gives himself the habit of regarding paroxysms of intermittent fever as a symptom sometimes indicating a state imminently hazardous to life, at other times by no means so, his first care will always be to observe what degree of evidence there is for the existence of the most dangerous state with which they are so often found connected. In this disposition of mind, he will seldom be inclined to overlook any means which the case may afford for obtaining an insight into its real nature, or to undervalue any testimony that may be present for the existence of the latter condition *.

* It is singular how protracted some of those cases of intermittent fever dependent on internal suppuration are. My brother tells me he was lately called to see a patient in consultation, who had been attacked with daily paroxysms of ague from a few days after her lying-in, which took place about three weeks before. The only circumstances in which it could be at all said to differ from regular quotidian, was, that the paroxysms sometimes, though rarely, occurred twice in the day. The patient had no apparent complaint with which the affection could be connected, when my brother saw her; but, from the sunk expression of countenance, the dull expression of eye, and excessive debility, he had little doubt that suppuration had taken place in some internal organ. There was no soreness of abdomen, no uneasiness in the hepatic region; there was no cough; the lungs sounded well; and the respiration was clear and natural when examined by the stethoscope. As he could not learn that there had been any symptoms of uterine or other local inflammation, and there appeared to be so much obscurity about the case, he recommended the continuance of the quinine, wine, and broth, which she had been already taking; believing, on the one hand, that there was a bare possibility of its being a case of idiopathic ague, and that at all events support was requisite; and, on the other, that if the affection was symptomatic of suppuration in some internal viscus, it would under any treatment prove fatal. The quinine suppressed the paroxysm once or twice for a day only, when it recurred again, and after lingering for a week or ten days longer, the woman died. On examination, about four ounces of matter were found effused in the cellular substance, which had formed a sac round it, close behind the right ovarium, resting on the sacrum; the fallopian tubes at both that and the opposite side were full of pus, and there was about an ounce of it in the fundus of the uterus, which was all through lined with a black, gangrenous-looking slough. Here was a case of ague, undistinguishable from regular quotidian, continuing for a whole month, and yet occasioned by internal suppuration.—*Dubl. Journ. Med. Science.*

INDISCRIMINATE EMPLOYMENT OF ERGOT OF RYE.

To the Editor of the Medical Gazette.

Sir,

The following case, shewing the ill effects of ergot of rye, has recently come under my notice. Perhaps it is of sufficient importance to be made public, as I am informed that the exhibition of the secale cornutum is very frequent with those practitioners who contract for parochial attendance.

In the year 1835, Mrs. ——, aged 35 years, was taken in labour with her sixth child. A medical gentleman who attended the poor of the parish was sent for, but finding the case proceeding slowly, blamed them for sending for him so early. The pains were natural and regular. Notwithstanding this, he gave her the ergot of rye, which was followed by the most excruciating pains, one of them lasting for full two hours. Through the action of the drug, the head was expelled, and remained in that position an hour, or thereabouts. When the body was born, the fœtus was dead; nor did the pains cease on the expulsion of the child; they continued, more or less, for four days. In consequence of such treatment, Mrs. —— made her case known to a respectable inhabitant, who promised to assist her in obtaining my attendance on her then expected confinement.

Sept. 25th, 1836, at 4 o'clock, A. M., I was sent for, and found the liquor amnii had escaped, the head presented; the os uteri was not fully dilated. The pains regular, extending round her; these continued till 7 o'clock. Thinking they might last three or four hours longer, I returned home. At 8 o'clock I was again summoned; the pains had changed: the head had descended into the first outlet of the pelvis. I waited till half past 10 o'clock, the pains becoming very severe and powerful; nevertheless, the head remained fixed, or in a state of arrest. The os uteri was now fully dilated, and I determined on delivery with the forceps, which was accomplished, but not without great compression of the head, and much traction. As in the former instance, so in the latter, the fœtus was of an unusually large size, certainly as large, if not larger, than any I had seen, after having practised midwifery

nearly 20 years. On inquiring of the mother whether she had suffered more this time than during her last labour, she stated that her present sufferings had not been half so severe as when she had taken the powder, or rather infusion. The mother and child are doing well.

The ergot of rye, though known as a therapeutic remedy in France as early as the beginning of the last century, has only of late years been brought into general use in this country. Nearly all the writers on its effects admit of irregularity as to its action. Dr. Blundell, in his lecture on Lingering Labour, makes the following remark, which is worth attending to. "The secale cornutum is likely enough to destroy the fœtus, if you use it—not in the lingering cases which we are now considering—but when the birth is delayed in consequence of increased resistance, rigidity, narrowing, or an unfavourable position of the head. In cases like these, if the secale cornutum be exhibited, and have a very lively effect, it may force the child down among the bones of the pelvis, where it may die by compression; not to mention that under the circumstances stated, there must be no small risk of rupturing the uterus."—I remain, sir,

Yours most respectfully,

JOHN GRANTHAM.

Crayford, Kent, Oct, 3, 1836.

BARON SLOET'S METHOD OF TREATING EPILEPSY.

To the Editor of the Medical Gazette.

SIR,

BARON A. SLOET VAN OLDRUITENBORGH, having communicated to me the remedy which he has employed against epilepsy, I wish to publish the prescription in your journal, in order that other individuals may have an opportunity of trying its efficacy; and more especially in consequence of the Baron himself being anxious to give it publicity. I am informed that the Baron's family have kept the prescription a secret for more than two centuries; and he states that he has given it during forty years to a great many epileptic persons, and that he has cured the greatest part of them. The particular ingredients are not unknown, and consist of

Pulv. Corticis Radicis Dictamni Albi (Fraxinella), lb. j.; Pulv. Zedoariæ, ℥iss.

From this the patient is to take a powder of two scruples, more or less, according to the judgment of the physician, in aqua florum tiliæ. He has increased the number of the powders to four in the day, but in those cases the zedoary has been reduced to one-half.

The Baron has also employed the dictamnus albus in the convulsions of children, with advantage. He recommends the dictamnus albus from Crete, in preference to that which grows in Italy, because the latter has no strength whatever; and he attributes the neglect of this remedy to persons having prescribed the pseudo-dictamnus instead of the real dictamnus.

The occasional employment of leeches ano, lavements, and aperients, are advised. I need not enumerate the different articles of diet which he prohibits, as it will be sufficient to state generally in a medical journal, that the patient should avoid whatever appears to interfere with the process of digestion.

I remain, sir,

Your obedient servant,

C. J. B. ALDIS, M.A. M.B.

The Hague, Oct. 14, 1836.

[A young officer was sent home from Bombay seven years ago labouring under epilepsy; the fits came on at least once in two months, and had endured several years: he consulted several of the most eminent practitioners in Edinburgh and London, without relief. He then went to Holland, and remained about four months under the care of Baron Sloet; from which time he never had any return of the fits, and has been able to continue his profession in India ever since. A relation of his under nearly similar circumstances, went in consequence to the Hague, and was also cured. In both instances the parties were bound by solemn promise not to reveal the nature of the remedy.—ED. GAZ.]

PUBLIC INSTRUCTION IN FRANCE.

[THE following document was drawn up by an intelligent English student in Paris, at the request of one of our most distinguished hospital surgeons here, by whom it has been forwarded to the MEDICAL GAZETTE.]

Every kind of instruction in France

is under the immediate superintendance of government.

One of the Ministers, named the "Ministre de l'Instruction Publique," takes the charge of all.

L'ensemble of these institutions bears the name of University.

No person can teach any of the different sciences or letters without having previously taken his degrees at the University.

The University is engaged in teaching Les Sciences Naturelles—Les Sciences Théologiques—Les Sciences Médicales—Legislation—and Les Belles-Lettres ; — from whence five grand divisions, known under the name of—

1. Faculté des Lettres.
2. Faculté de Droit.
3. Faculté de Théologie.
4. Faculté des Sciences Physiques.
5. Faculté de Médecine.

Medical instruction includes three large Facultés, each sharing equal rights in point of law ; but that of Paris is considered by far the best.

There is one Faculté at Paris, another at Montpellier, and a third at Strasbourg.

Almost every provincial town has a school, called *secondary*.

The secondary schools teach Anatomy, Surgery, and Medicine, and are only intended to instruct young men who aspire to become what are here termed Officiers de Santé.

Each Faculté is composed of a great number of professors, who teach the different branches of medicine.

All their lectures are public and gratuitous; notwithstanding, in order to obtain the degree of M.D., young men are obliged to pay (under the name of "inscriptions") fifty francs every three months during four years, amounting to 800 francs, or 32*l*. Each pupil is compelled to undergo five examinations (during these four years), which are in the order as follow :

1st Examination — Sciences Accessoires *.
2d ditto—Anatomy and Physiology.
3d ditto—Pathology.
4th ditto—Legal Medicine and Midwifery.
5th ditto—All or every thing that concerns Medicine and Surgery, and more particularly Clinical Instruction at the bed-side of the patient.

And, lastly, each candidate for the degree of M.D. must compose a thesis, chosen by himself.

Each examination costs the candidate 50 francs, and the Thesis 50 francs more—total, 300 francs. Thus the whole amount of expense is 1100 francs, or 44*l*.

The Examiners are all Professors of the Faculté.

Each Professor has a fixed salary of 6000 francs, or 240*l*. per annum ; in addition to which they equally divide the perquisites of each examination, which amount to about 240*l*. more per annum.

All theoretical instruction is given in a most magnificent amphitheatre, where 1500 students can be admitted. Any individual may enter, on presenting a card from a physician or surgeon.

Practical instruction in surgery and medicine is delivered in the hospitals, where the physicians and surgeons devote daily two hours in the wards of the sick, and afterwards retire to the operating theatre, to deliver one hour's lecture on the most interesting cases in the different wards.

For the accessory sciences, chemistry in particular, pupils are admitted into the large laboratories at the Ecole Pratique, where every advantage is offered for manipulating.

Botany is taught in a splendid botanical garden belonging to the School of Medicine, admittance to which is always gratuitous and public.

Pathological anatomy is taught from amongst the numerous collections of the Faculté.

Practical anatomy is taught in beautiful, long, airy, and well-lighted rooms, (Clamart), where upwards of 2000 bodies are distributed annually for dissections and operations. Pupils can dissect during six months for 4*l*. Pupils may perform all the operations on the dead body twice over, and attend a course of lectures on surgery, for 25 francs (1*l*.), during the whole of the summer months.

Independent of this general instruction, to which all pupils are admitted, the School of Medicine provides or gives a special instruction to 120 young students, who are called "etudiants de l'école pratique." These students obtain this privilege by concours. All pupils are admitted. These students have the advantage of dissecting with much greater facility than other students ; their dissections cost nothing.

* Including Chemistry and Mathematics.

An institution exists in Paris, called "l'Administration générale des Hôpitaux," belonging altogether to the city of Paris; not under the control of "la Faculté de Médecine." This institution requires a certain number of young men to attend upon the patients of the different hospitals (they are what in England are called "dressers.") In return for their services they receive a moderate salary, and partial board and lodging; but are amply supplied with opportunities for distinguishing themselves in their profession. The salary is about 16*l.* per annum; in some 20*l.* For the "dresserships" of the different hospitals there are young men of two classes, known under the name of *externes*, 400 in number, and who are named by concours, 100 per year; their duty is to attend to the patients, dress them, &c. They receive no payment, but have the right "de concourir pour être *internes*."

Les internes, 80 in number, are obliged to follow the surgeons and physicians during their visits in the wards; to assist them in their operations; to inspect the faithful execution of the surgeon or physician's prescriptions; and, finally, in the absence of the surgeons, to direct whatever treatment they think most proper. If required, they may perform any operation in the absence of the surgeon: thus performing the duties of an assistant-surgeon in our English hospitals.

Independent of the instruction that the *internes* and *externes* possess, with reference to the treatment of diseases, "l'Administration générale des Hôpitaux," about four years ago, directed the construction of a most magnificent establishment (entirely and purposely for them), where anatomical instruction is afforded them decidedly with profusion. This establishment is called the Anatomical School of Clamart, where upwards of 2000 bodies are annually provided for them.

I have obtained information from the first authority on this subject in Paris, namely, the "Prosecteur" of all the Parisian hospitals, that no less than 5000 bodies are provided *annually* for dissection in the two anatomical schools of Clamart and the Ecole Pratique.

Organization of the Parisian Hospitals.

The hospitals belong to the city of Paris. The inhabitants provide yearly a fund of 11,000,000 francs for their support.

There are upwards of twenty establishments appointed to receive sick persons, including hospitals for infirm, old, and mad persons. Each establishment is governed by a "Directeur," who receives a salary of from 3000 to 5000 francs per annum.

The "Directeur" of each hospital is obliged to give an account of his conduct to an "Administrateur générale," who receives a salary of 12,000 francs a year.

This "Administrateur," on the other hand, furnishes every necessary information of what passes in the different hospitals, expenses, &c. &c. to a "Conseil générale, formed of negotiants and respectable inhabitants of Paris.

This general Council is compelled to enregister its decisions by the Municipal Council; and, finally, the Minister of the Interior inspects these decisions.

The surgeons of the hospitals are nominated by concours. Every surgeon is admitted who has taken his degrees, whether at home or abroad.

The jury is composed of eight hospital surgeons; and the "Administrateur" presides also on the occasion.

The nomination of the successful candidate is confirmed by the "Minister de l'instruction publique," and the Council.

The professors of the Faculty are also elected by concours.

The jury is composed of two-thirds of the professors of the Faculty, and of one-third members of the "Académie de Médecine."

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Treatise on Tetanus; being the Essay for which the Jacksonian Prize for the Year 1834 *was awarded by the Royal College of Surgeons, London.* By THOMAS BLIZARD CURLING, Assistant-Surgeon to the London Hospital, and Lecturer on Morbid Anatomy. 1836.

To this Essay, as appears by the title, the Jacksonian Prize was awarded; and

from the research and discrimination which it displays, we have no doubt that the decision was a just one. On such a subject much of absolute novelty cannot reasonably be expected; and we look principally for proofs of the author having made himself master of all that has been recorded on the subject, and having drawn judicious inferences from the data thus collected. It is in this point of view that we think Mr. Curling's essay deserving of especial commendation: it displays great industry, and the industry of an intelligent mind; so that if the reader do not rise from its perusal with all the knowledge of tetanus which he could wish, at least he may be assured that he has had placed before him all that our imperfect art has yet made out regarding this obscure and intractable disease.

There do not appear to be any grounds on which a correct estimate can be founded as to the frequency of tetanus, as compared with other diseases, or of the proportion of cases in which it occurs after wounds — nor even of its average rate of mortality. It seems, however, to be well ascertained that it supervenes more frequently after wounds received in battle than in the injuries of civil life — probably from the subjects of the latter being less exposed subsequently. In a table given by Mr. Curling, and which contains the history of 128 cases, it is remarkable that in sixteen only did the disease occur in females; and that in these only four died,—being a mortality of but one-fourth; while of the remainder, amounting to 112 males, sixty-six perished, being more than one-half. The great majority died before the eighth day. One case is mentioned, on the authority of Wepfer, in which tetanus proved fatal in three minutes; and one by Professor Robinson, in which the patient was dead in a quarter of an hour. On the other hand, a case is related by Morgagni, in which death did not take place till more than three weeks from the onset of the tetanic symptoms. As to the interval between the receipt of the injury and the attack of tetanus, it is generally not less than one, nor more than two weeks; though instances are recorded in which three, four, and even more weeks have intervened.

The chapter on the Pathology of Tetanus is elaborate and interesting. Many eminent continental writers, including Larrey, Recamier, Frank, and Brera, have maintained that inflammation of the brain or spinal cord is the cause of the disease. Now this doctrine is combated at considerable length, and, in our opinion, very satisfactorily, by Mr. Curling; who, without denying that inflammation is sometimes coincident with tetanus, yet holds and proves that this disease is frequently present where nothing whatever of inflammatory character is observed during life, or of the consequences of that action are to be detected after death. He also points out the distinction which it is essential we should make between pure tetanus and the spasmodic affections which accompany certain inflammations of the nervous centres—especially of the spinal marrow. In the advanced stage the distinction becomes easy, because paralysis usually takes the place of spasm, which is never the case in true tetanus.

The general result of our author's investigations leads him to infer that tetanus is a purely functional disease, the nature of which is hitherto undiscovered; that it is distinct from inflammation, and accompanied by no organic changes peculiar to itself; that the seat of the morbid action is the *tractus motorius*, the superior part being most frequently affected; that this tetanic irritation directly interferes with no organ except the muscular system, the other parts which suffer being implicated only in a secondary manner.

The *treatment* occupies many pages, but records little more than the results of unsuccessful experiment. Several well-authenticated cases are referred to, in which the patients recovered, although no remedies of any kind were adopted. In those where the patients recovered under particular methods of treatment, it is far from being always clear that the recovery was a *cure*.

As to local interference, the general evidence is against the removal of the injured part, even where this is practicable. Larrey is the chief authority in its favour, but the English army surgeons, by whom it was fairly tried, did not find it answer. Sir James M'Grigor, Dr. Hennen, and Mr. Guthrie, relate numerous instances in which it was adopted without the least advantage. The only modification of this treatment, which Mr. Curling regards as

deserving of farther trial, is the division of the nerves, where this can feasibly be done.

As to the general treatment, purgatives are recommended, so as thoroughly to clear the *primæ viæ:* a whole list of narcotics is disposed of in a sentence; and the accounts of mercury stated to be "far from favourable;"—in all which we cordially agree with the author.

In estimating the effects of bloodletting, it is of course important to attend to the distinction above mentioned, so that inflammation producing spasm may not be confounded with pure tetanus. In the former, venesection may be required, as in any other inflammations; but it appears from the table, that of twenty-six cases of tetanus in which bleeding was employed with other remedies, thirteen died,—giving us the usual average, and therefore affording no very encouraging prospect: at the same time we think Mr. Curling expresses himself too strongly when he says, "in the human subject I hold it to be dangerous in the highest degree." We believe, from what we have seen, that in some cases of pure tetanus, bleeding, if practised with discretion, is beneficial.

Probably more cases of tetanus have been treated by opium than any other remedy, and perhaps the greatest number of recoveries on record are where this medicine had been exhibited; but the circumstance above mentioned will prevent us from attributing too much importance to its influence. The quantity sometimes given will admit of no other explanation than that it remains inactive and unacted upon in the stomach. Thus Mr. Pereira, in his valuable lectures on Materia Medica, published in this journal, mentions an instance in which the immense quantity of four pounds, seven ounces, and six drachms of laudanum, together with six ounces, four drachms, and forty-five grains of solid opium, were administered within ten days!

Of all the remedies, however, employed against tetanus, tobacco is that which appears to us most deserving of further trial; and we are pleased to find our opinion corroborated by that of our author. It is very true that on turning to the table we find that out of nineteen patients to whom it was administered, only nine recovered; but the fact is, that in several, if not all the fatal cases, there were obvious circumstances to render the cause of failure apparent. Thus in one it was not adopted till the patient was *in articulo;* in two others it was barely tried, not being persevered in; in another there was organic disease of the brain; in one the remedy was carried too far, and the patient's death evidently hastened, if not actually caused, by its overwhelming effects. It is an agent of prodigious power, and must not be lightly meddled with; it ought, therefore, to be administered under the immediate superintendence of the medical practitioner.

Cold affusion is another powerful means of making an impression on the nervous system, and one which has repeatedly been eminently serviceable in tetanus; but, like tobacco, it requires discrimination, as patients have sometimes been killed by it. Thus Mr. Morgan relates an instance in which he directed a man with tetanus to be plunged into a cold bath; the symptoms disappeared on the instant, but he was taken out dead. This, however, was an extreme case, and is not to be taken as an illustration of what generally occurs. The best examples of success from the cold affusion are some in which wine was simultaneously administered rather freely. Dr. Currie's cases, in which four or five bottles of Madeira were drunk every day by the tetanic patient, are too well known to require notice. A case is given, which occurred in the London Hospital, in August, 1835, under the care of Mr. Scott, in which porter and ale were freely given, the latter to the extent of eight pints in the day; no intoxication was produced, and the patient recovered.

From the specimen of Mr. Curling which this volume affords, we can sincerely say we shall be glad to meet with him again.

MEDICAL GAZETTE.

Saturday, October 29, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ROW AT APOTHECARIES' HALL.

SUCH is the title of a notice in the *Times* of Saturday; from which, and other sources of a private nature, we

learn that an affray took place on the 21st, being the last day appointed for the registration of pupils.

It has always been our effort to take as impartial a view as possible of the unfortunate differences which so frequently occur between the Worshipful Society and the medical students. We have never been led, like our contemporary, to hold that because the pupils were more numerous, and could purchase more copies of our journal, they must therefore be right in every thing they did; neither on the other have we been so wedded to the powers that be, as to think them infallible in all their proceedings. Between the contending parties (for such there is too much appearance of their being), we have endeavoured to hold the balance with a faithful hand—and so shall we now.

We do not think the young gentlemen who presented themselves to register their tickets were justified in any violent or riotous behaviour; but still less do we think the authorities at the Hall were warranted in adopting the course which is described in the *Times*. It is quite well known that the pupils—some from ignorance of its necessity, some from procrastination, and some from not having had the money sooner —postpone both taking out their tickets and having them registered till the last moment. This may be indiscreet, but such is the fact, and experience had shown the authorities at Blackfriars that it was so. Now we are given to understand, that this season, instead of any additional facility being afforded, the hours of registration were actually curtailed. But however this may be, it was quite apparent, before the 21st, that a large number of the pupils in London had not registered; and consequently, in our opinion, it would have been no more than proper to have made some arrangement to meet and obviate the inconvenience which must necessarily arise. Nothing of this kind, however, appears to have been thought of; and accordingly, when the last day came, there was a rush of pupils to the Hall. The crowd was great, and the time short; many, therefore, began to fear that they would be excluded altogether, and hence we have no doubt that they became impatient. What was the consequence? Why, that beadles and constables, armed with sticks and staves, were called upon to restrain them; which they did by beating about their heads, and, if the report be true, felling several of them to the ground.

We take our information on this point from the *Times*. "The constables (we are told) were obliged to hammer their pericraniums with their staves," so that "a few of the young gentlemen had their polls brought into resounding collision with the pavement, and were much sobered thereby." Now, from the manner in which the Society of Apothecaries and their regulations have at different times been spoken of in that which is very justly called "the leading journal," we feel convinced that there is no hostile feeling toward them in that quarter, and consequently that there was no intention of bringing discredit upon them by this report. We trust, indeed, it would be doing injustice to any member of the court to suppose that the flippant paragraph to which we now allude emanated from one of them; but we are by no means so well satisfied that some of the subordinates did not resolve to take time by the forelock, and transmit to the newspapers such an account of this affair, with those whom they designate "hot-headed Esculapian tyros," as might have the appearance of the whole blame having rested with them, and that in fact they did require to have "their polls brought into collsion with the pavement," before they could be sufficiently "sobered."

The only instance in which any thing

of a similar kind has ever occurred within our own recollection—we mean in which constables have been employed against any member of the profession in any of our public establishments—was when Leadbitter was called upon to thrust Mr. Wakley forth from the College of Surgeons: but here there was no "hammering of the pericranium," nor any "collision with the pavement," but the "hammering" was of quite another part, as it came into "collision" with each successive bench during his reluctant and somewhat undignified descent; —the *honourable* M. P. being merely dragged out by the heels in rather an unparliamentary fashion, and deposited with "gentle violence," in the street.

Altogether, the present is a different affair, and we think some explanation is requisite. If true, it will be but an unsatisfactory piece of news for parents in the country, to read that some of their sons were beaten on the head by constables, when they went to register at the Hall. Again, if the account be exaggerated, it was the duty of the authorities whose conduct was thus impeached to see that a contradiction or explanation was immediately made public.

As it was, we perceive the registration could not be completed, and that the time was extended in consequence to the 26th. We trust that effectual means will be taken by the worshipful Court to prevent any risk of a like scene being again repeated.

A REVEREND HOMŒOPATHIST.

The homœopathists continue to demonstrate their indifference to our criticisms—by almost daily letters in the newspapers. We have had *four* from Dr. Uwins; and, on his epistolography being exhausted, the pen has been taken up by the Rev. Thomas Everest, Rector of Wickwar. We regard these two antagonists with very different feelings. Dr. Uwins is merely weak—Mr. Everest is ignorant, vituperative, and vain; pronouncing an opinion *ex cathedra* on the science of medicine, of which he evidently knows nothing, and most irreverently, if not profanely, dishonouring the Scriptures, by wresting them, on all occasions, to the purposes of angry controversy on matters wholly unconnected with the duties of his sacred calling. He formerly compared Hahnemann to our Saviour, and now likens himself and his inane efforts to propagate homœopathy to the mighty works of St. Paul, in support of Christianity! With an audacious disregard of truth, he represents the medical man who opposes the doctrines of the Germanic visionary as a "merchant of miseries," whose only motive is the fear lest he should get fewer "of those rascal counters, with which agony fees his unwholesome palm,"!—and then, in a paroxysm of most unchristian zeal, exclaims—"*cleave the leprosy of Gehazi to him for ever!!*"

We reprint his communication to the *Times*, and shall subjoin the passage in the Gazette which has called it forth, because even now that his letter of reclamation lies before us, we find it impossible to give any character of it more appropriate than that which was published by anticipation.

"When we inquire for their literature, we find their champion in the person of a worthy son of the church, whose talent for invective and the misapplication of texts of Scripture, forms his chief claim to public attention. We have had a specimen of him, and we can truly say we congratulate Hahnenannism on the possession of such a mild, meek, discreet, and sagacious partiasn."

To the Editor of the Times.

Sir,

In a late number of your journal you inserted an article from the Medical Gazette which contains a charge against me. It is with great reluctance that I reply to it; but now that I have

seen Dr. Uwins's letter, I think it right to make a few observations on the subject, convinced as I am that your gentlemanly feeling and sense of justice will not refuse to let him who has been attacked be heard in reply.

Touching the death of poor Malibran, as it is not my province, so it is not my intention to say anything. Any impartial person must come to the inevitable conclusion, that death under homœopathic treatment is very rare, judging from the delight with which the medical men have seized this opportunity to threaten Dr. Belluomini with the treadmill.

As to myself, in the first place I beg to tender my thanks to the Editor of the Medical Gazette, for having exculpated Dr. Johnson from the charge of having written the article in question. Conceived as it is in the worst taste, it is quite refreshing to learn that Dr. Johnson is himself mistaken in asserting that he did write it.

In the next place, I would beg to assure that respectable editor, that his arguments against homœopathy are as devoid of novelty as they are of reasoning. There was one Demetrius, in olden times, who anticipated him. He collected the craftsmen, and to all Paul's arguments they gave no other answer than shouting together at the top of their voices, "Great is Diana of the Ephesians:" and when Paul argued, they put him in the stocks; when he entreated to be heard, they stopped his mouth by shutting him up in prison—a wonderful plan, doubtless, for deciding disputed questions; but it is singular that our worthy editor did not recollect that it was not successful.

I pity the editor of the Gazette much for the loss of his temper—more for the loss of his practice; but I see no necessity for his being vulgar. That the present absurd practice of physic is coming to an end, there is no doubt. Why cannot this editor adjust his robe round him, and fall gracefully, instead of spluttering like a cudgelled cockney?

He calls me (among others) a brazen impostor. I have no objection whatever to his using that or any other similar arguments against homœopathy, for I am conscious of its injustice. "Suffering is the badge of all my tribe." I pray to God that he will enable me to pass my very humble life in humble efforts to do good to my species, even though "the Edomites and the Israelites, the Moabites and Hagarens, Gebal and Ammon and Amalek, cast their heads together" to abuse me for it.

I remain, sir,
Your very obedient servant,
Thomas R. Everest.

Wickwar Rectory,
Oct. 17, 1836.

By the way, the term "brazen impostor" *was not* applied to the reverend gentleman, whom, till now, we have looked upon but as a wrong-headed fanatic; as, however, he takes the designation to himself as peculiarly his own, we beg to stand corrected, freely admitting that he must know his claim to it better than we can be supposed to do.

CHARING-CROSS HOSPITAL.

We continue to receive statements and counterstatements about the recent proceedings at the Charing-Cross Hospital; but we cannot devote our pages to a discussion involving so much of individual misconduct, and so little of general interest. We may, however, observe, that the Committee have published what appears to us a complete refutation of certain charges brought against them by the medical officers whom they dismissed.

But this same document passes entirely *sub-silentio* that which impartial persons will consider as by far the gravest offence. It is this:—Report says, that in order to procure the recognition of the hospital by the College of Surgeons, the requisite number of individuals—namely, one hundred—were actually got into the house, and were seen by the deputation from Lincoln's-Inn fairly laid out and comfortably tucked up under the bed-clothes. But here the compliance with the conditions of the College seems to have ended: the number of patients straightway progressively diminishing, it is said, even down to sixty! Now this is either true

or false. If false, why has such an allegation been passed over, to refute others of comparatively little importance? If it be true, the deception practised involves the good faith of all the officers of the establishment; and the only prudent course is to avoid all discussion, so as to take the chance that in time it may be forgotten.

Meanwhile, we know that the hospital *was* in the list of the recognized, and *is* there no longer.

MEETING OF GENERAL PRACTITIONERS.

A LARGE body of gentlemen belonging to the Association of General Practitioners dined together on Thursday last, at the Bridge House Tavern. The card of invitation which they had the politeness to send us, owing to some mistake, did not reach us until too late to make any arrangement for being present. Under these circumstances we copy the following report from the *Times* of yesterday:—

"The dinner of the Association of the Medical General Practitioners took place yesterday at the Bridge House Tavern, on the Southwark side of London Bridge. The members, friends, and visitors of the Association, mustered to the number of 100 persons; and at six o'clock the dinner was served up. Mr. G. Webster was the chairman on the occasion. The *Non nobis* was sung, on the removal of the cloth, by Messrs. Broadhurst, Fitzwilliam, and other professional singers. After which, the chairman proposed the health of the King, the Queen, the Princess Victoria, and the rest of the Royal family, all which were drunk with the greatest loyalty and enthusiam. The healths of the army and navy were then drunk, and the usual national songs sung on such occasions were given. On the toast of "success to the Association" which the company were assembled to commemorate, being proposed, the Chairman took occasion to advert to the state of the medical profession generally, and particularly to the situation of that portion of it which consisted of general practitioners. Certain persons had been pleased to call the general practitioners the subordinates of the medical profession. It was true the general practitioner did not ride about the town in an elegant chariot, and pocket the guineas of his patients, nevertheless his labours were most useful, and it was necessary he should be a man of education and character. He (the Chairman) was glad to see assembled around him on the present occasion so many gentlemen of respectability in the profession. It augured well for the future benefit of the society, and it proved that that branch of the profession to which they belonged, and of which he also was a humble member, were at length resolved to exert themselves for the preservation of their rights. The medical profession of England was at the present moment in an anomalous situation. It was not only assailed without by the Eadies, the St. John Longs, and the Morisons, but it was in a degree distracted by the practices of those by whom it ought to be supported. In addition to the quackeries of other arts, homœopathy had been added to the list—a system of mysticism imported from Germany — a system founded on mystery. Mr. Webster then expatiated on the abuses arising from the manner in which the services of general practitioners were at present remunerated, and exhorted the company to use their exertions to bring about a better state of things. He hoped this meeting would form a nucleus, around which a much larger association would grow. The roots were already planted in the metropolis, and it would not be long before the whole country would be shadowed with the branches.

The health of 'Dr. James Johnson, and success to the medical press,' was then drunk with great applause.

Dr. J. Johnson returned thanks.

A great number of toasts more immediately connected with the medical profession were then drunk. An excellent song, written expressly for the occasion by Mr. Hudson, on the delusions of Homœopathy, was sung, and received *con amore* by all present, and the festivity of the evening was kept up till a late hour."

DR. CHAMBERS.

THE Queen has been pleased to appoint Dr. W. F. Chambers to be one of her Majesty's Physicians in Ordinary. — *London Gazette.*

JARDIN DES PLANTES.

THE garden so called in Paris has been progressively increasing during the last forty years, and has now reached the extent of 84 acres. It contains 526,000 specimens of the three kingdoms of nature, among which are 10,000 different species of plants.

CLINICAL LECTURE,

Delivered at St. George's Hospital, Oct. 21, 1836,

By Dr. Seymour.

Rheumatism—Paralysis from Lead—Fungus Hæmatodes of the Stomach—Epilepsy—Paraplegia.

RHEUMATISM.

The two cases of rheumatism of which I spoke in my last lecture, have proceeded quite satisfactorily, and the patients are nearly convalescent. The woman (Young) is, in point of fact, quite well; there is no symptom whatever remaining of the rheumatism. This has taken place in one week, so that no practice could be more efficient than the one which was adopted. The other case, which occurred in a woman named Jean Vaughan, and who was a great deal worse than Young, is likewise nearly convalescent: nothing remains but some slight pain about the shoulder and hips; the swelling and redness have entirely disappeared, and her hands, which were so much swollen as to prevent her using them without great distress, are likewise quite well. The only alteration in the mode of treatment was, that I was obliged to give her one or two doses of aperient medicine. I found that the guaiacum mixture did not act sufficiently on the bowels; it was omitted for a day or two; her bowels were then opened freely, after which we resumed the use of the mixture, and the issue has been such as I have stated.

PARALYSIS FROM LEAD.

The cases of poisoning from lead are essentially chronic in their nature, but those of which I spoke in my last lecture are better. Claney, who is suffering under disease of six years' standing, has less pain, and is taking nourishment. There is still necessity for continuing the daily exhibition of castor oil, to relieve the spasm of the muscles of the abdomen, under which he labours. The other is a case which will require weeks instead of days, before we can expect to see any decided alteration. However, the last report is, that the muscles of the abdomen have become relaxed; the appetite is improved, but the castor oil acts imperfectly; he was obliged to take several doses before we got any evacuation at all.

FUNGUS HÆMATODES OF THE STOMACH.

I now come to speak of a very important case, at present in the hospital—that of J. Wilson. Almost the first day of the session you saw in the dead-house the post-mortem examination of a man named Hewitt, who laboured under fungoid disease of the stomach. A great many of you had an opportunity of seeing this man. He laboured under sickness, with occasional vomiting; great pain in the region of the stomach for a year and a half previously; and he came into the hospital in the last stage of the disease. When the body was opened, the whole of the pylorus was surrounded with fungus hæmatodes, deposited between the coats, so that the passage became compressed, and the passage of the ingesta was obstructed. The food was tolerably well digested, but it was accompanied with pain.

The present patient complains of pain in the abdomen, at a spot midway between the umbilicus and the ribs, on the left side. This is rather a remarkable position for the pyloric orifice of the stomach, but it is the less remarkable, because it not unfrequently occurs that this is the part referred to by the patient in such diseases. On making pressure externally, there is pain over an extent about the size of a small apple. This arises from the tumor growing externally, and pressing on the peritoneum and the parts adjacent. Internally on taking food, there is no pain and no vomiting. When you read in books of persons labouring under cancer of the stomach, the symptoms desrribed are these:—As soon as the patient swallows food a burning sensation is felt, and soon after the food is returned, at first unaltered, but subsequently mixed with a bitter or sour fluid. After a time every thing taken is vomited, and then the patient brings up matter not only a little changed, but a quantity of matter resembling coffee-grounds. In this way the disease goes on, until death ensues. These are the symptoms named in books as the most important symptoms of cancer of the pylorus, but there is another disease which goes under that name, which is of a very different character, viz. the fungoid disease, of which I am now about to speak. Sometimes the internal membrane is not affected, but between the coats is deposited an enormous quantity of the same sort of matter which is found in the brain, the lungs, the liver, and the kidneys, and is termed fungus hæmotades, or encephaloid disease. The present case is a very well-marked instance of the affection. Sometimes this fungoid matter exists in a very considerable quantity, and sometimes, as in the case before us, it is barely appreciable by the external touch. Some years ago I saw a gentleman who had been for years past losing flesh: though he had a very fair appetite, still his food did not seem to nourish him, but his general aspect indicated that he laboured under a malignant disease. Not being

able to detect any particular appearances, I requested him to lie in bed, that I might have an opportunity of examining his body. Midway between the umbilicus and the ribs of the left side was an enormous tumor, so large that I found he could scarcely have buttoned his breeches without perceiving it, and yet he had no vomiting, no pain in the part; his appetite was tolerably good, and never at any period during his illness did he reject his food. Here is a case, [presenting a specimen] where one half of the stomach is occupied by a fungoid growth, leaving the pylorus tolerably free. The specimen having been in spirits for a long time, has shrunk. Although the fungoid mass occupied so large a portion of the stomach, yet the patient went on to the last hour much as ordinary persons do, in respect to food.

How does it happen that in certain cases termed *cancer* there is pain and vomiting, while in other cases these symptoms are absent? In the great majority of instances there is a difference in the disease. In cancer of the stomach there is thickening and ulceration of the coats of that organ, whereas fungus hæmatodes is a new structure. In the latter case the tumor is very compressible, so that when food is taken into the stomach, it is pushed through the pylorus, the passage itself being left tolerably free. That is the case in the specimen on the table—the pylorus is not contracted. Here are some drawings by Cruveilhier, [exhibiting them] very beautifully executed, of true cancer. In such cases the patients become extraordinarily thin, and there is always pain and vomiting. Sometimes patients become so excessively thin, that you can feel the hardened portion through the abdominal parietes, but that is not commonly the case. Here is a case [referring to a drawing] where the lower half of the pylorus is scirrhous: it is like a case which I saw of Dr. Chambers's, in which the whole stomach was in this state. Here is a drawing of a case resembling as nearly as possible that of the patient up stairs: there is a fungoid growth, which may not be appreciable externally, but it surrounds the pylorus, and is deposited in the coats.

Another remarkable coincidence occurs: although there is no vomiting, there is another symptom — pyrosis, or water-brash. Where the growth is large, as in the specimen before you, the membrane secretes this water, and it is a symptom of the disease. In the present case there is no vomiting when food is taken into the stomach, nor is there any pain; but on pressing externally, pain is experienced, because pressure is made on the fungoid growth, and the peritoneum in the same part intervenes; and there is also present this symptom of water-brash. I should beg you to observe, that although the water-brash may exist without organic disease, yet its presence is always suspicious, and it becomes essentially necessary to examine into the condition of the liver and the stomach. The water-brash consists in the bringing up, every now and then, of a small quantity of clear water. In a private case which I had under my care for two years, the only inconvenience which the patient suffered, was, that his mouth filled with cold water, so that he was obliged to leave the room and evacuate it several times in the day: the water was tasteless. In the present case, the patient represents the fluid as sometimes salt and sometimes bitter, and it comes up in small quantities. In many cases of this description this is a morbid symptom; but I do not mean to say that the moment you see it you are to conclude that the patient labours under cancer. I remember seeing the case of a patient, in Middlesex Hospital, who spat up a quart of water in a day, which had some acidity. When she died, it was found to arise from an enormous liver, in which there were tubercles of this fungoid disease. It is a symptom of disease of the stomach, or viscera; and where a person's looks indicate the existence of organic disease, it is to be looked upon with suspicion. It occurs in Scotland as a functional disease of the stomach, and is supposed to arise from eating vegetable food. How far that is true I cannot say; but in the present instance we look upon it as a symptom of deep-seated organic disease.

The practice in this case has been to place the patient on nourishing diet; and I will explain why I ordered the following medicine:—twenty drops of liq. potassæ; half a scruple of canella alba, and ten drachms of infus. cascarilla. Looking at the case, in the first instance we should say that it was produced by inflammation, or increased action going on, and that stimulating remedies should be avoided; but in fungoid diseases we do not find that to be the case, and there is no medicine with which I am acquainted that will diminish the symptoms so much as this. I do not know that carminative medicines are attended with any other effect than the relief of the symptoms. Some patients will take brandy and water better than any thing else; and as it is a mortal disease, the patient should be made as comfortable as possible. Whether liq. potassæ acts on this as on tumors of a suspicious nature, it is impossible to say. I have seen patients take this remedy for many weeks, with an improvement of the general health, and certainly a delay of the

fatal symptoms; and this has induced me to give it in the present instance. If there had been a gnawing pain in the stomach, the medicine would have been ill applied, and I should have given something which would relieve that dreadful distress on taking food, which always occurs in true cancer of the stomach. The principal remedies to be looked to for the relief of pain are the absorbents, such as magnesia, or a saline draught. Ten grains of magnesia several times in the day will sometimes work wonders; or equal parts of magnesia and subnitrate of bismuth. In the case which you saw after death, the man was frequently relieved for many weeks by the subnitrate of bismuth, and was rendered a great deal more comfortable. I have seen this happen in many cases. The dose is ten grains of the subnitrate of bismuth and magnesia, and this may be given three or four times a day. It is not the magnesia alone which produces the good effect, for I have been obliged to have recourse to the bismuth where magnesia has failed; so that the bismuth has some specific action. Professor Odier, of Geneva, first employed it, and it became very popular in the north of Europe, especially in cases of cardialgia: the Emperor of Russia made him a present of a diamond ring. It was then used here, and not being found to answer in all cases, it seemed for some time to be laid aside; but the employment of it is again revived. It relieves pain, whether arising from functional or organic disease, and more especially where there is this secretion of mucus from the stomach, in a greater degree than any other remedy with which I am acquainted. The next best remedy for the relief of the pain is prussic acid; and I know that in the new Pharmacopœia we shall have a formula for its preparation. One of the evils attendant on this medicine is, that it decomposes very readily, and therefore we are uncertain as to its strength. In the usual form, two to three minims of Scheele's medicinal acid, at the utmost, exhibited several times a-day, will relieve the pain.

In the present instance the object is, if possible, to diminish the growth of the tumor, to nourish the patient, and to give him those medicines which will cause a diminished secretion from the fungoid mass. With regard to the external pain on pressure, a blister has been applied, and ordered to be dressed with mercurial ointment, which is found the most effectual in these cases. The pain, however, arises from the external growth of the tumor and pressure upon the part, and not from the interior of the stomach.

A word with regard to the position in which the tumor is found. You are aware that the pylorus is generally situated above the umbilicus, towards the right side, but here it is midway above the umbilicus, towards the left side. How comes it in this situation? The mass has increased in this direction, and become adherent. Sometimes I have seen it drag down two or three inches below the umbilicus; and in one instance it was so large and low, that it was believed to be a lodgment of fæces in the colon, having caused adhesion. An opening was made (after consultation) by a very celebrated surgeon, and a small quantity of matter was let out, which appeared to have been contained in the tumor. Here [presenting it] is the preparation.

This is a very interesting case, and I recommend you to examine it; but I beg that you will not make hard pressure, on account of the pain to which it gives rise. Having seen one of these cases, you will never forget it. These tumors, which come in this particular part of the body, are very different from what, under cancerous disease, you would expect to be the case: this man may live for many years. The constitutional symptoms are extreme sensibility in every part of the body, and the pulse continues at about a hundred till the near approach of death. Sometimes a small quantity of fluid collects in the peritoneum, but not often. It not unfrequently happens that the veins absorb a certain portion of the mass; and it likewise not unfrequently occurs that the liver has a similar deposit in it of fungoid matter. I have nothing farther to say upon the case, than to advise you to watch it, because, although it is impossible to restore the man to health, yet it is interesting in a scientific point of view. To see the symptoms during life, and to be able to test them after death, is of great importance to men of our profession.

EPILEPSY.

There are three cases in the house, of the same disease (speaking from the external appearances), although they have probably arisen from very different causes. The first is the case of Gibbons, in Crale Ward; the second a boy, named Higgins, in Hope Ward; the third has only been under my care a few days, having come to me from the surgeons' ward.

Gibbons's case is perhaps the most remarkable. She is at present, to all appearance, in perfect health, and is about 24 or 25 years of age. About two years since, she was attacked with epileptic fits. Epilepsy is defined to be "convulsions, ending in sleep;" the patient falls down, and foams at the mouth. There are a

great number of symptoms which occur in particular persons. After remaining strongly convulsed and foaming at the mouth, for a period varying from five minutes to half an hour, the fit goes off, and the patient falls into a profound sleep. In the case of Gibbons the fits are very short, and she is attacked without any warning. In the great majority of instances the patient is warned by a sensation in the head, or a creeping sensation up the finger, or arising from the foot, or sometimes in the belly: and when it reaches the head, the patient falls down in a fit. This aura has been termed *aura-epileptica*. I do not think that it is present in any of these three cases. In a woman twenty-four years of age, suffering under such a slight form of the disease, we should naturally look to the uterine organs as the cause. There being no fall, no blow, nothing which could immediately call attention to disease of the brain, and there being no particular affection of that organ instanced by double vision or half vision, or palsy in any part of the body, the first thing in such a case is to inquire whether any part at a distance is suffering from deranged function; because (more particularly) the uterine organs being affected, parts situated at a distance sympathise with them. Thinking it very likely that this was the case here, I made inquiries as to the menstruation, and found that it was not very regular. As the fits were very slight, and were unaccompanied by warning, or by violent pain (for there was no pain, and no tangible symptom of organic disease), I endeavoured to treat it as an hysterical affection dependent on the condition of the uterus. She was consequently ordered to take large doses of assafœtida, to be cupped on the sacrum immediately before the return of the period, and she afterwards used the cold shower-bath. There was some relief at first; the fits only occurred at the interval of a fortnight, and then again they became frequent. Subsequently to this she took valerian, but still without any good effect. Steel, in small does, was tried, but it was obliged to be given up. She has been bled and cupped repeatedly for the complaint, without the smallest good effect. I held a consultation upon the case with Dr. Chambers, who recommended large doses of ammonia: it was tried, but without advantage. Sulphate of zinc was then used, but that also failed. Not finding that the ordinary remedies of a depleting, evacuating, or stimulating kind, were beneficial, I had recourse to what is sometimes very serviceable — rubbing the spine with a strong liniment (ext. bellad. in camph. lin.) This is a great remedy with some persons, when hysteria goes to a great extent. As the woman has been here many weeks, no method has been left untried. Since I have resorted to this rubbing in, I think the fits have declined a little, and I wish it to be continued, to see whether those consequences will take place which I have sometimes heard of in private practice. These cases are all well worthy of your observation, because it is one of the most difficult diseases we have to treat; and if, on inquiry, you should find any mode of treatment followed by success, you will have numbers of instances in which to employ it in future life. These cases sometimes require to be very long under treatment, because there is a long interval between the fits.

The next case is that of Higgins, who labours under a very remarkable form of the disease. He was a cow-keeper, and he says that the man who was over him was very harsh, and beat him a good deal, but it does not appear that he beat him about the head. He is a great, thick, fat fellow, about twenty years of age, and of a plethoric habit of body. It is remarkable that the fits came on but once a month, and he says it is always at the full moon. The theory of the influence of the moon upon disease and mania, has long since been abandoned by all sensible men; but the only fits he has had have come on at the end of a month. I do not believe that the moon has any thing to do with them, but I do believe that there is, in a great number of cases, a periodicity. The disease first comes on at the end of a month, and then it does not occur again for a month; and when the habit is once acquired, there is often a periodicity observed. In certain maniacal cases, persons will be for a fortnight what is called *high*—difficult to manage; and then for a fortnight they will be *low*—that is, melancholy — and the change will take place at the same time to an hour; say at eleven o'clock at night. I knew one instance of a young lady who was deranged for many years, and was in these particular circumstances. She was in a house where the observations could be made with the most perfect accuracy. When I found her gay and lively, the nurse would say that she was within two days of becoming low; and to the day, almost to the hour, the change used to take place. There are circumstances which are observed likewise in nervous pain of the face: it will go on for three or four days, and then intermit. Intermittent pain of the head is very common, though it does not arise from marsh miasmata; and there may be an intermission of pain arising from organic

disease of the head. Where there is a regular intermission, arsenic will frequently remove it, even where it depends on organic disease.

This boy tried a great many things before he came into the house; and, among others, he had recourse to *charms*. Many of you have seen him; he is a good-natured-looking lad, with an abundance of red hair, and is rather a short fat person. Thirty unmarried ladies (for if there had been a married one it would have broken the spell) combined together to buy him a silver ring, to wear on his left hand, for the purpose of breaking off the fits. This, gentlemen, is "the march of intellect." He has desisted from the use of the ring, but with considerable difficulty. He asked one gentleman whether he did not think that there was something in it.

Charms have been from all eternity used for curing this disease, and often with effect, because the minds of individuals will sometimes exercise over these intermissions a considerable degree of influence. Epileptic persons who have warning of the attack, will sometimes be able to stop it. I remember a boy telling me that when the fit was coming on, he bit his tongue, and the pain kept off the fit. A ligature placed round the limb, or the putting on of a tourniquet, will sometimes stop the fit where there is warning. Undoubtedly there is no disease where charms have been so much resorted to as this complaint, more particularly because it has been supposed to be an infliction of Providence, and hence it has been called *morbus sacer*. The Druids allotted to it the misletoe, the misletoe being sacred to the gods, and therefore being the best to be employed in keeping off a divine infliction. Dr. Baillie states that he has seen epilepsy cured the most frequently by the nitrate of silver, then by oleum succinum, and thirdly, by the viscus quercus, or misletoe; so that whether the Druids gave a good guess, or were informed that it would cure the disease, Dr. Baillie, a man of undoubted sagacity, had some confidence in this medicine.

On the 2d October this patient had a fit, and it recurred three times that day. When he first came in, I had him bled, and put him on antispasmodic medicines; his head was kept cool, and his bowels regularly purged. I believed that there was only some fulness of the vessels of the head; he was evidently fond of employing the functions of the stomach; and I thought by these means, and a low diet, I should keep off the fit. However, on the 2d October, the day that he expected the fit would appear, he had a severe attack, which lasted some considerable time, and was accompanied by a violent pain in the head, by great stupor, and which left him very ill after it. He was again bled two days afterwards, but the blood was neither buffed nor cupped; there was no trace of inflammation, nor has been any whatever in the interval. Since that time there has been no fit, and he is, to all appearance, in perfect health. All that is done by me at present, is to keep him on low diet, to put him in the shower-bath, keep his head cool, and his bowels freely open. I believe that there is no evidence whatever of organic disease. If the periodicity of the disease should still continue, I shall be obliged to try him with arsenic in the interval of the fits, for the purpose of keeping off the intermission observed in the disease.

Of the last case, I can give you but little information at present: for the patient has only just been put under my care. He says that the disease arose subsequently to a fall, and if so, there is, in all probability, some organic disease in the brain. The case has been sent to me from Sir Benjamin Brodie, as not being a surgical case. I suppose, therefore, that there is some mistake in the man's statement, or Sir Benjamin's attention has not been drawn to the fall. The difficulty is increased by the man stuttering so as to make it impossible for him to convey an intelligible answer. I have desired that the history of the case may be obtained from his friends. He says that the disease is of about two years' duration; that it immediately succeeded the fall upon his head; and that he has had several fits a day, at intervals, since that time. We must endeavour to make out whether there is any injury of the brain, before we can proceed in the treatment with any hope of success.

Epilepsy may certainly arise spontaneously, without any organic disease. You are aware that the greatest people of antiquity were subject to this very complaint, and which, in some instances, was supposed to be a proof of increased, rather than of diminished, faculties. Julius Cæsar, every one believes to have been a man of superior talent, and yet he was subject to epileptic fits. Mahomet was subject to the same description of fits, and yet he was in possession of his faculties nearly to the last moment of his life—never, except during the fit, having shewn any thing but a knowledge of mankind, and their wants and wishes. A great many other persons have been subject to this particular complaint, without its shortening their lives, or impairing their reason; and consequently, it is certain that there are cases arising from functional derangement. Children are sometimes at

tacked with epilepsy from teething, or irritation in the bowels. Adults are liable to it—and particularly females, from a derangement of the uterine system. Still, however, there are a great number of cases in which epilepsy appears to depend on organic disease of the brain, and likewise where it ends in stupidity, fatuity, or madness. In all cases we must determine what is the condition of the brain. Where it arises in children from teething, and in certain cases even where it occurs at the period of menstruation, the cure is not very difficult; and there are cases in which the prognosis may be quite favourable. It will sometimes arise from the presence of worms. One of the worst cases that I ever witnessed—varying from epilepsy to catalepsy—occurred in a young lady affected with lumbrici; and yet lumbrici exist in many cases, without producing any obvious bad effect.

The treatment in the first case—that of the female—has been to endeavour to regulate, as far as possible, the uterine system, active remedies having been employed before. In the case of the boy, the object is to reduce the state of the plethora to the standard of health, and then to try to prevent the intermittent attacks from coming on regularly. And in the third case, we must ascertain whether there has been any blow which has caused organic disease of the head.

A great many observations have been made as to what part of the brain is most generally affected in epilepsy, and there are a number of disputes on the subject. Sometimes it has been thought that a small portion of bone deposited in the falx, and irritating the brain, has been the cause. I remember a case of this kind, which was discovered on opening the body after death, but where there was not more bone deposited in the falx than I have seen in many cases without such a result. Some persons have attributed it to bodies of the nature of hydatids, which are found in the plexus choroides; but in general, though not always, you will find the organic disease in the cerebellum. Some remarkable observations were made on the subject by two physicians in Germany—the Wenzels. They agreed, together with other medical men, to seek throughout the district round them for cases of epilepsy, to watch them, and when the patient died to examine the brain by the side of a healthy brain, so that they might more correctly see what was amiss. They published their work some years ago, in which I think thirty cases, with the post-mortem examinations, were mentioned; and in every one of these there was more or less disease of the cerebellum. There is not the least ground for doubting the statements of these gentlemen; for either they were impostors, which we cannot believe, or the cases occurred. Assuming the latter to be correct, though it by no means proves that epilepsy, as an organic disease, may not arise from other parts besides the brain; yet it proves that it is very frequently, and most frequently, dependent on an organic alteration of that most important portion of the brain.

There is no evidence in any of the cases before us of organic disease, which is manifested in the interval, where that is the case, by other affections. If the patient see double, or half an object—if he remain after the fits in a state of stupor for a length of time, and the mind gradually declines, the fits becoming more frequent as he advances in life, we may believe that there is organic disease; and such cases, as far as I know, are absolutely incurable.

A great many counter-irritants have been recommended in this disease, one of which is tartar emetic ointment applied to the head, which will bring out pustules. Two drachms of tartar emetic may be combined with an ounce of hog's lard; and a bit about the size of a nutmeg may be rubbed over the head morning and evening. Some persons have great faith in this remedy. The late Dr. Jenner had a decided opinion in its favour, in cases of disordered intellect. He states that making an eruption at a distance is the way to cure the complaint. One of the causes alleged as productive of epilepsy all over the continent is the repercussion of a cutaneous eruption; and nothing is more common than to hear of the cessation of some eruptive disease preceding the epileptic attack. I presume that these were the cases in Dr. Jenner's mind when he recommended this medicine. He has published several cases of mania which were cured by this remedy. His work, which was published in 1822, is very difficult to be obtained. He shews that many diseases of the brain arise after persons have been accustomed to some habitual eruption, which has ceased. I saw the book fifteen or sixteen years back, but since that I was unable to obtain a copy. I tried the Medico-Chirurgical Society, the College of Physicians, and the British Museum, but it was not to be procured. I then wrote to Dr. Jenner's friend and executor, Dr. Baron, of Cheltenham, and he has let me see it. In the book are related, as I have said, many cases of tartar emetic ointment being rubbed on the skin having cured mania, the affection, in some instances, having supervened on the cessation of some habitual eruption. It was Dr. Jenner's practice to rub it on the

arms or legs. He recommends keeping up the eruption for the space of three weeks. I am inclined to think that, if in some of these cases I am not successful by other means, I shall give it a fair trial.

These cases, then, you will bear in mind. Read the symptoms as well as you can for yourselves, and observe the medicines prescribed, the object of which will be pointed out in future lectures, or at the bed-side of the patient. In this way you will get a complete history of the cases; and if you only discover what has had a great reputation, but will not cure the disease, even that will be a great matter.

PARAPLEGIA.

Before concluding I will call your attention to a case of paraplegia in Cambridge Ward, which I hope is going on well under the employment of tincture of cantharides. It is a curious and interesting case, and is worthy of your observation.

The patient labours under palsy of the hands and feet (diminished sensibility and motion), and some few weeks ago was totally unable to walk across the ward. There was pain of the head, and as it was not relieved by bleeding and every medicine which was administered, there was every reason to fear some organic disease of the brain. He took mercury, and subsequently strychnine, in such large doses, that I was afraid to give it any longer; and I then put him upon thirty drops of tincture of cantharides thrice daily. He is now able to walk with a stick, and feels his ankles and knees getting better. The only method of explaining the effect of the cantharides is by supposing that effusion goes on for a time in the brain and spinal marrow, and this is relieved by the diuretic effect, which is also the means of keeping down the effusion. Dr. Baillie has stated that in some cases paraplegia may be occasioned by these causes; and if the Doctor be right, there is a clue to the action of the tincture of cantharides, which does not produce any good effect, so far as I know, except where it acts as a diuretic.

The case has been a long time in the house, and I shall not enter into the whole of the history from the beginning; but since the patient has been put on this medicine the relief has been so great, that I should recommend you to watch the case for yourselves, as being one of those instances which, under ordinary circumstances, may be considered a great cure. Having adverted to some cases in which all our remedies fail, it is a comfort to find that the art of medicine has some resources in the most severe forms of disease.

TREATMENT OF FRACTURE BY A BONE-SETTER.

CORONER'S INQUEST.

The most important inquest which has taken place in Lincoln for some years, was held at the County Hospital on Wednesday last, commencing at four o'clock in the afternoon, and continuing until ten at night. It was held before Mr. James Hitchins, coroner, and a highly respectable jury of sixteen citizens, on view of the body of John Scott, then lying dead in the hospital. — After viewing the body, the coroner addressed the jury, stating that in a town like Lincoln, it was impossible they could come to an inquest without receiving some intimation on the subject they were to decide upon, and he was aware there were various rumours afloat on the present occasion. He felt quite confident, on looking at the respectable jury assembled, he need not tell them they must be guided by the evidence alone, throwing all reports to the winds. After a few other observations the inquest proceeded.

William Bourn resided in Lincoln, and saw a man drive up to the Adam and Eve, in the parish of St. Margaret, on Thursday last, about half-past four in the afternoon; he was driving a three-horse van, belonging to Mr. Dawson, of Withcall, in which were eight rams. In attempting to pull up against the Adam and Eve, the van got master of the horses, which becoming unmanageable, threw over the vehicle, and pitched out both the man and the rams, just opposite the office of Frederick Burton, Esq., solicitor. The driver was thrown against the wall, but got up directly. Witness asked him why he drove so quick? to which he replied that his master ordered him to drive fast. He then said, "Oh dear, sir, my arm is broken." Witness recommended him to go to Mr. Mason, the bone-setter, which he did. Saw the deceased again at ten o'clock that night, at the Adam and Eve inn; he said he had got his arm set, and felt rather more easy; he had it in a sling, and had a bandage round his chest which confined his arm, and which *he stated was tight*. Did not see him again till he went to the hospital.

Thomas Hallofield, a stone-mason, residing in Eastgate, Lincoln, who saw the accident, corroborated the statement of the former witness, and added, that deceased got into his cart, at his invitation, and rode down as far as Mr. Mason's residence. Was at the Adam and Eve that night, when Mr. Mason came to visit him.

Mr. Samuel Hadwin, house-surgeon of the hospital, stated that on Friday morn-

ing, the 7th inst., about one o'clock, the deceased came to the hospital, having his right arm in a sling made with his handkerchief; there was another bandage round his elbow. Witness began to unwrap them. Deceased told him that the arm was very badly injured, and that Mr. Mason said the bones protruded. Hearing this, witness desisted, and had him conveyed into a ward of the hospital, where he was undressed and put to bed. He then began to unwrap his arm. Beneath the handkerchief which he removed, witness found a bandage which had been saturated with blood, but which was then dry and hard, and was bound several times round the elbow joint. Some portion of the bandage adhered so firmly, that it was necessary to cut it off. Immediatey over the outer surface of the elbow joint, there was a large piece of leather, spread with some adhesive plaster, adhering very firmly to the skin, the removal of which caused great pain. At the back of the elbow joint, witness perceived a cut about an inch in extent, covered by lint. The neighbourhood of the joint was excessively swollen, and full of pain, extending into the elbow joint. The man's arm was placed in a convenient position on a pillow, and leeches and other applications were resorted to. After this he expressed himself relieved. Medicine was also administered. The deceased, when he first came into the hospital, stated that he was in very great pain.

Coroner.—From the examination of the arm, was the treatment which had been pursued, do you think, correct?

Witness.—It was diametrically opposite to what I should have adopted.

Witness continued.—Saw deceased again on the Friday evening, when he expressed himself more free from pain than he had been: the treatment which had been adopted was continued. On the next day, deceased stated that he had passed a tolerable night, and the distension above the elbow joint did not appear so great as before; leeches were applied, but the diminution was not striking. It was considered by the surgeon of the month (Mr Hewson) necessary to bleed the man copiously: this was done, and medicines were administered, which had their expected effect, and he continued much the same until the evening.—On the following morning, witness found the deceased's arm, from the hand to the shoulder, very much distended: the remedies were continued. In the middle of the day the man complained of extreme pain in the arm; more leeches were applied, and the arm was steeped for a considerable time in warm water: from these means he derived great relief. In the evening, he complained of restlessness, and appropriate remedies were administered.—On Monday morning, between seven and eight o'clock, deceased's arm was found to be in a state of mortification. At the direction of the surgeon for the month, a consultation was called of the surgeons to the establishment, who assembled at 10 o'clock. The patient was apprised of his danger, and that his death was inevitable, unless an operation was performed by the removal of the limb, and that even after that the chance of a favourable result was so trifling that they could hardly recommend it. This the surgeons themselves communicated to the poor man, but he decided to have the operation performed without delay. The arm was then removed at the shoulder joint.—Deceased's countenance after the operation was more favourable than before it, and he stated to witness that he felt more comfortable since the removal of his arm: he appeared to be in a much better state the whole of the day than any professional man acquainted with his previous state could have expected. On the following morning, unfavourable symptoms re-appeared; he then sank rapidly, and died at 4 o'clock in the afternoon, being sensible to the last.

Coroner.—There is one portion of your evidence, stating that the treatment which deceased received prior to his coming into the hospital was diametrically opposite to that which you would have pursued. What do you mean by that?

Witness—It was decidedly opposed to all practice of surgeons, and to the first principles of surgery.

Coroner.—Is it your opinion that from the arm's being treated in the way you have described, mortification would be hastened?

Witness.—Decidedly. I should say, that if the party who bound up the arm wished to produce mortification, he took the very means he should have adopted for that purpose.

Coroner.—Was it possible for mortification to ensue from the wound itself?

Witness.—I think it *possible* that the injury itself might have produced mortification, even though it had been attended to by the surgeons of this institution; but the probabilities are that it would not.

Juror.—Do you think Mr. Mason treated this case as a fracture, or a wound?

Witness—I do not know; his treatment is so much at variance with every principle of surgery.

Coroner.—By whom was the operation performed?

Witness.—By Mr. Hewson.

Coroner.—Was it performed in a skilful manner—as it ought to have taken place?

Witness.—Certainly: it was performed as skilfully as possible.

Coroner.—Was Mr. Hewson at all nervous?

Witness.—He was not.

Coroner. — My reason for asking that question is, because it is stated in the town that he was so nervous as to be obliged to call for assistance.

Witness.—I was at Mr. Hewson's elbow for the whole time, and there was not the slightest trepidation, nor did he ever require assistance.

Juror.—Did the patient die from the operation, or from mortification having entered into his frame?

Witness.—I am positive he died from mortification.

Mr. Hewson, Mr. Kent, Mr. Howett, and Mr. Franklyn, surgeons, were successively examined, as well as Mr. Mason. The jury ultimately returned a verdict of *accidental death.—Lincoln Mercury.*

CAMBERWELL PRACTITIONERS, AND THE MEDICAL CLUB SYSTEM.

To the Editor of the Medical Gazette.

"Candor dat viribus alas."

Sir,

I was not Quixotic enough to wage war with a shadow, and therefore felt anxious that the writer who called himself a "Camberwell Practitioner" should come out of his hiding-place: and before I attempt to grapple with his arguments, I must be allowed to make a few observations with regard to the misstatements in both his letters. I again repeat that Messrs. Flower and Young are residing in the parish of Lambeth, and their paying for a Camberwell gas-light does not make them parishioners: it would be as fair to say that a man living in Holland-Street must neeessarily be a Dutchman!

What Mr. Flower means by "*gross abuse,*" I know not, but I assert that the language he describes was not used at the meeting alluded to; there was no "din and confusion;" the gentlemen who put their signature to the paper were not called "black sheep;" not a word was said about posting *their names;* and no individual was bold enough to offer to shed one single drop of blood in the cause: and will your readers believe it, sir, that, *notwithstanding these assertions, Mr. Flower was not at the meeting;* and as I have before said, though such a *stickler for parishes and districts,* is not himself living in the parish of Camberwell.

I will briefly recapitulate Mr. Flower's arguments in favour of this system, to "avert the evil of such a measure" as the one *produced* by the Poor-Law Commissioners: these said Commissioners, however, are *kind enough* to recommend a remedy!—"Timeo Danaos et dona ferentes."

1st. This system will improve the moral condition of the poor, and make them *independent.*

2d. It will prevent their having recourse to the parish-surgeon, through fear of a ruinous bill; and under this plan, they will have the option of selecting their own medical attendants.

3d. That it cannot degrade or injure our profession.

4th. That those who do the "*work* will have the *pay,*" and youths will not be sent to attend the poor women when in labour.

5th. That a dispensary is a far more objectionable establishment.

1. The very basis of the system is unstable and rotten, for it is founded in an *untruth.* The members of these clubs are told that they will become *independent,* when, in fact, they are in a state of *dependence;* but the great evil of the scheme is, that it holds up a bait for the upright man to leave the path of honesty and independence, and walk in that of pauperism. The dishonest man cannot be compelled to pay towards the club, and he will continue to cheat the members of our profession, many of whom are not (*considering the sphere in which they move*) so independent as the *provident* mechanic who receives 35*s.*, or even 25*s.*, per week.

2. Medical practitioners in this neighbourhood are not in the habit of sending *ruinous bills* to the poor; and I defy Mr. Flower to bring forward a single instance in Camberwell of a poor man who has been ruined in consequence of being compelled to pay a long bill! The poor will not be able to select their own medical attendants, as the majority of the medical men refuse to act.

3. Is it not degrading to a member of our profession to attend a mechanic *earning* 25*s. per week* for a less sum than the village farrier would expect for physicking his pig? And if this principle be once generally established, shall we not be injured by a *higher grade* adopting the same method for securing cheap medical attendance? When these clubs were first formed, those only were admitted as members whose wages did not exceed 10*s.* or 14*s.* per week, but now individuals subscribe who receive three times that amount; and is it not fair to suppose that the scale will gradually increase?

4. Here is the whole gist of the argument; for although *benevolence* is placed in the foreground, yet the "*non-remuneration*"

occupies the most prominent part of the picture.

With regard to youths being sent to cases of midwifery, I apprehend that those young gentlemen (who have attended l ctures, &c.) are quite as competent to undertake the case as the parish midwife; and without this practice, let me ask, how are they to obtain that knowledge so necessary to make them efficient practitioners?

5. The same argument which Mr. F. applies to dispensaries is equally applicable to these clubs. "*Suo sibi gladio hunc jugulo.*" Many who now pay 3*l.* and 4*l.* yearly for medical attendance, and will not go to a dispensary, would, I believe, belong to this club. I contend that in London and its environs it is impossible to ascertain the amount of a man's wages; they may when he joins the club be 25*s.* per week, and the following month he may receive 40*s.*—although I admit that the plan may be practicable in a coal-mine.

The great cause of the misery amongst the lower orders of the metropolis does not originate in ruinous medical bills, but in the licensed "gin palaces"—

"Where sit, involved and lost in curling clouds
Of Indian fume, and guzzling deep, the boor,
The lackey, and the groom: the craftsman there
Takes a Lethean leave of all his toil;
Smith, cobbler, joiner, he that plies the shears,
And he that kneads the dough; all loud alike,
All learned, and all drunk."

Leaving Mr. Flower to the enjoyment of his "homely and humble festal board of co-operation in a good cause," free from the "hollowest exultation," and graced with a "*mens conscia recti*,"

I remain, sir,
Yours respectfully,
E. Crisp.

Walworth, October 24, 1836.

P.S. I am living in Walworth, and *practise* in Camberwell; therefore I am a Camberwell *Practitioner*: and this will probably apply to all the gentlemen who were at the meeting (according to Mr. Flower's argument).

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

October 20th, 1836.

Edmund Thomas Halliday, Warminster, Wilts.
Alexander Paull, Truro, Cornwall.
Thomas Maitland, Tiverton, Devon.
Giles Symonds Roper, Mappercombe, Dorset.
Henry Rogers Burton, Market Harborough.
Richard Grimbly, Banbury, Oxfordshire.
William Derry Pearce, Launceston, Cornwall.
John Potter Sargeant, Leicester.
George Arthur Smith.
Frederick Walter.
George Wilson, Leeds.
Sackville Lupton, Thame, Oxon.
John Pechey, Isleham, Cambridgeshire.
Robert Druitt.
John Cartwright.
Edward Foot, Salisbury, Wilts.

NEW MEDICAL BOOKS.

An Account of the Watering Places on the Continent, and their Mineral Springs. By Edwin Lee. Post 8vo. 7s. 6d.

Practical Demonstration of the Human Skeleton. By Geo. Elkington. 12mo. 7s.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Oct.* 25, 1836.

Abscess	2	Hooping Cough	2
Age and Debility	41	Indigestion	1
Apoplexy	10	Inflammation	24
Asthma	6	Bowels & Stomach	2
Cancer	1	Brain	2
Childbirth	2	Lungs and Pleura	5
Consumption	69	Insanity	6
Convulsions	13	Jaundice	1
Croup	2	Liver, diseased	1
Dentition or Teething	4	Measles	10
Dropsy	18	Mortification	7
Dropsy on the Brain	13	Paralysis	3
Dysentery	1	Rheumatism	1
Erysipelas	1	Small-pox	5
Fever	9	Spasms	1
Fever, Scarlet	1	Thrush	1
Fever, Typhus	2	Tumor	2
Gout	1	Unknown Causes	39
Hæmorrhage	2		
Heart, diseased	3	Casualties	12

Increase of Burials, as compared with the preceding week . . 141

METEOROLOGICAL JOURNAL.

Oct. 1836.	Thermometer.		Barometer.	
Thursday . 20	from 32	to 56	30·34	to 30·28
Friday . . 21	36	54	30·23	30·22
Saturday . 22	41	55	30·29	30·30
Sunday . . 23	32	57	30·29	30·28
Monday . . 24	41	54	30·29	30·25
Tuesday . . 25	46	52	30·18	30·14
Wednesday 26	46	54	30·11	29·98

Prevailing winds, W. by N. and W. by S.
Cloudy, except the 20th, 22d, and afternoon of the 23d: a little rain on the evening of the 25th.

Charles Henry Adams.

NOTICES.

"R. H. B." will excuse us. His letter is an advertisement.

"Medicus."—We cannot take the same view of the conduct of the party aggrieved, as our correspondent does.

In compliance with the repeated application of several correspondents, we shall reprint in next number our abstract of Mr. Kiernan's Researches on the Structure of the Liver; the number in which it originally appeared having been long since out of print.

The papers of Dr. Ogston, Mr. Skey, Mr. Robson, Mr. Collier, Mr. Hunt, Mr. Thompson, "M. I.," and other correspondents, in our next.

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 5, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture VI.

Other Medico-legal relations — Human and Comparative Structure—National peculiarities—Varieties of the Human Race—Form of the Head—Form of the Pelvis in different Nations—Family Varieties—Supernumerary Fingers and Toes. Identity—*Legal distinctions:* 1. *Identity of Living Persons—Family Likeness—Accidental Resemblances—Remarkable cases of controverted or mistaken Identity.*

There are other relations, beside those of Age and Sex, in which individuals may be viewed and distinguished medico-legally. Some of these I shall introduce to your notice in the present lecture; others I am obliged altogether to omit.

Normal human structure.—The subject of disinterments alone suggests several inquiries which it would demand a certain degree of skill in human anatomy, and particularly in osteology, to satisfy. Without a competent knowledge of this kind, sutures might be taken for fractures, and fissures and foramina, for the effects of violence. For example, in a case cited by Dr. Paris, a man was accused of having murdered his step-daughter, by boring a hole in her skull with an awl. The body was exhumed after two years and a half sepulture, and an inquest held. Upon inspection of the head, a small hole was discovered near the ear, and the jury returned a verdict of wilful murder. It happened, however, that the circumstances of the case excited the attention of Mr. Sheldon. He obtained access to the skull, and on viewing it, declared that the hole which was supposed to have been made with an awl, was only a natural opening, a foramen for the passage of a vein, and he pointed out the enamel-like structure of its sides, very different from the appearance of an aperture made by force. In confirmation of what he stated, he produced a dozen or more human skulls, having in them similar perforations, variously situated. The consequence was, that when the assizes took place, the grand jury ignored the bill.

Comparative structure.—Again, our skill in comparative osteology may be tested, where it may be necessary to distinguish the remains of a human subject from those of animals. Suppose only a few detached bones are found, we must show whether they be those of the human species, or belonging to brutes. The long bones of quadrupeds, and particularly the humerus, have sometimes confounded inexperienced observers. Strange mistakes, too, have happened among those who ought to have known better. The bones of elephants have been deliberately taken for those of giants; and it required the ability and authority of a Cuvier to prove that Scheuchzer's *Homo diluvii testis* was only in reality a gigantic salamander. But perhaps the most amusing blunder of the kind was that committed by the *savans* who examined the bones found in the grand sarcophagus of the second pyramid. Belzoni and others thought they had here the mortal relics of King Cephrenes: but Mr. Clift undeceived them; he showed that the precious remains were only those of an ox!

To attempt to lay down, however superficially, the principles by which you should be guided in investigations of this sort, would carry me far beyond the legitimate objects of my course. You must depend on your resources as human and comparative anatomists; and the more minutely and exactly you are acquainted with the details of both departments of knowledge,

the greater of course will be your advantages as medical jurists.

National peculiarities.—But there are certain other circumstances connected with the structure of the individual, which are both curious and legitimately within the province of legal medicine. I allude to national and family peculiarities of the human form.

Let us suppose a case—and experience has shewn that it is something more than ideal. A stranger from a foreign land presents himself, claiming to be considered as one in whom long absence from his native shores has operated great changes: his aspect is that of one of another race: doubts are entertained of his identity: and it is the interest of those who possess that property of which he may be the rightful owner, to be duly satisfied as to his pretensions. In such circumstances it may devolve on the medical jurist to determine whether certain physical appearances observed in his bodily structure, and supposed to be indicative of an alien origin, are congenital or have been acquired. Again, in cases of disinterment, when the remains must be identified, the deceased may have been a native of a distant clime; here it will be a part of your duty to note, among other points, the characteristic size, shape, and proportion of certain parts of the body. Should any of you practise in India, or in our distant settlements, it is by no means unlikely that you may be charged sometimes with such an inquiry as—whether, in a given case, the bones discovered are those of a European, a Negro, or a Hindoo?

It will be proper, therefore, to point out some of the principal differences of structure which characterize the

VARIETIES OF THE HUMAN RACE.

In the remarks which I have to make on this subject, I shall chiefly follow Cuvier, availing myself at the same time of the learned researches of Dr. Prichard.

Mankind is characterized by unity of species. By the term *species*, we imply separate and distinct origin, evinced by the constant transmission of certain peculiarities of organization. But there are *varieties* of mankind—understanding by that term certain diversities in individuals and their progeny, which are observed to take place within the limits of species. Different species, in fact, do not intermingle or propagate, while varieties may, and do.

Cuvier has adopted a threefold division of the varieties of the human species; Blumenbach a fivefold: while Prichard differs from both, in maintaining that there are seven distinct varieties. Fundamentally, I believe there is no material difference between these able authorities: they all seem to admit a threefold *primary* division,—as nearly as possible agreeing with Cuvier's Caucasians, Mongolians, and Ethiopians.

Forms of the Head.

The sketches here before you will serve to give a good general idea of the form and proportions of the head, by which the three principal varieties are distinguished.

Professor Camper was the first who attempted to point out certain characteristic differences of the heads of men, and also of animals. His method was the well-known one of taking the facial angle—by imagining a line drawn from the meatus auditorius to the base of the nose, and another touching at once the prominent centre of the forehead, and the most projecting part of the upper jaw-bone—the head being viewed in profile. In the angle formed by these two lines he conceived to consist the distinctions not only between the skulls of the several species of animals, but also those which are found to exist between different nations.

Blumenbach, in the course of his long and constant study of skulls procured from all quarters of the globe, became convinced that Camper's method was very imperfect: he adopted, in consequence, another and more satisfactory mode of proceeding. His plan is to view the skull vertically, or with the vertex upwards, and then to observe its relative proportion of breadth. In comparing and arranging skulls, according to the varieties in their shape, we ought, he thinks, to survey them in that method which presents at one view the greatest number of characteristic peculiarities. "The best way of obtaining this end is to place a series of skulls with the cheek-bones in the same horizontal line, resting on the lower jaws; and then viewing them from behind, and fixing the eye on the vertex of each, to mark all the varieties in the shape of parts which contribute most to the national character, whether they consist in the direction of the maxillary and malar bones, in the breadth or narrowness of the oval figure presented by the vertex, or in the flattened or vaulted form of the frontal bone." This is called the *vertical* method.

Dr. Prichard, however, gives the preference to a mode of examining the skull first pointed out by Mr. Owen. It is the reverse of the vertical method: the skull is viewed from the base; and, as Dr. Prichard says, "the relative proportions and extent, and the peculiarities of formation of the different parts of the cranium, are more fully discerned by this mode of comparison, which has hitherto been much neglected, than by any other method."

But obviously we cannot do better than

avail ourselves of every possible view of the skull and its proportions—to survey it in all directions, as well laterally as vertically, and from the base. When this is done, we shall be satisfied that all the varieties in the form of the human head may be referred, on a general comparison, to the three following classes.

Fig. 11.—*Head and Skulls of the Caucasian variety.*

1. *The Caucasian variety.*—This form of head is distinguished for its beauty, according to our European notions. It is that which characterizes the appearance of the Georgians and Circassians, in the neighbourhood of Caucasus, whence the human race is supposed to have so largely spread in the infancy of the world. It includes all the Europeans, with the exception of the Laplanders, the western Asiatics, and the northern Africans. The complexion is more or less white, the cheeks having a florid hue; the hair long, soft, and of a variety of tints—black, brown, chesnut, red, white, &c. The skull is of the symmetrical or *oval* form; the forehead is more expanded than in the other varieties, "while the maxillary bones and the zygomatic arches," says Dr. Prichard, "are so formed as to give the face an oval shape, nearly on a plane with the forehead and cheek-bones, and not projecting towards the lower part, as in other varieties of the human skull. The cheek-bones neither project outwards and laterally, nor forwards. The upper maxillary bone has the alveolar process well rounded, the anterior portion having a curve in a perpendicular direction. This gives a perpendicular and not a projecting position to the front teeth, to which the lower jaw and its teeth correspond."

Fig. 12.—*Head and Skulls of the Mongolian variety.*

2. *The Mongolian variety* is characterized by the marked projection of the cheek-bones, the broad face, the small and oblique eyes, the straight black hair, the scanty beard, and the olive complexion. This race includes the eastern Asiatics, the Laplanders in Europe, and the Esquimaux in North America. The skull is of the broad square character: it is *pyramidal*, according to Dr. Prichard. "The cheek-bones," says this author, in his excellent work on the Physical History of Mankind, "project from under the middle of the orbit, and turn backwards in a large arch or segment of a circle, the lateral projection of the zygomas being so considerable, that if a line drawn from one to the other be taken as a base, this will form with the apex of the forehead a nearly triangular figure. The orbits are large and deep; the upper part of the face is remarkably plane and flat,—the nose being flat, and the nasal bones, as well as the spaces between the eye-brows, nearly on the same plane with the cheek bones."

3. *The Ethiopian variety*, or that of the Negro, is remarkable for the blackness of the complexion, the woolly frizzly hair, the broad flat nose, the prominent muzzle, and the large lips by which it is characterized. The Africans to the south of the Atlas

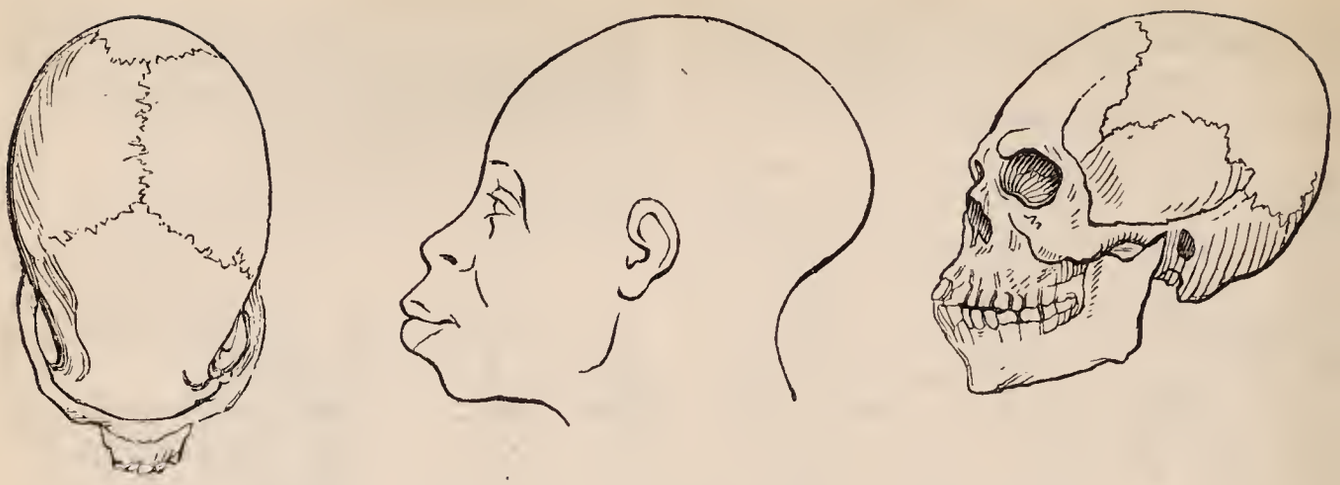


FIG. 13.—*Head and Skull of the Ethiopian or Negro variety.*

chain belong to this variety. The skull is narrow and elongated; "the principal characters are referrible to the idea of lateral compression; the temporal muscles having a great extent, rising very high in the parietal bones, and being very large and powerful, subject the head to a force producing the effects of lateral compression and elongation. The cheek-bones project forward and not outward; the upper is lengthened and projects forward, giving to the alveolar ridge and to the teeth a similar projection. From the shape of the upper jaw alone would arise a diminution of the facial angle." This is the form of skull which Dr. Prichard terms *prognathous*, from the projection of the jaws.

Hardness and other peculiarities of the skull.—A striking character in the skull of the African Negro is its great hardness, density, and weight. It is frequently found to have a whiteness and compactness of texture, which give it the appearance of ivory or even of marble, rather than of bone. Nor is this condition of the cranium unaccompanied by a corresponding peculiarity in the skeleton generally. The bones of Negroes are usually much heavier than those of other men. The crania of Europeans differ greatly as to thickness and weight, those being usually found the heaviest which belonged to persons of diseased constitution. In the American nations, particularly those of the South, the skulls have been observed to be particularly light.

A remarkable fact respecting the Ethiopian skull has been observed by Mr. Owen; namely, the approximation made in its structure to that of the troglodyte. In several Negro skulls, and in one of an Australian savage, Mr. Owen noticed the juncture of the temporal and parietal bones, and consequently the complete separation of the sphenoid from the parietal, which in European and most African skulls meet for the space of nearly half an inch, a process of the sphenoid bone extending upwards to join the lower anterior angle of the parietal. The same structure was observed in six out of seven young chimpanzees. But it is worth adding, that the orang resembles man in this particular: in seven out of eight crania of young orangs the sphenoid joined the parietal bone, as it commonly does in human skulls.

The Pelvis in different Races.

Some of the principal diversities of figure in the different races of men may now be briefly noticed; and first with regard to the pelvis,—for on the shape of this part the form of the body in great measure depends.

In the Negro.—The loins and hips are more slender in the Negro, and the pelvis narrower than in Europeans. The female negro, however, is supposed to have a very capacious pelvis,—though the evidence of that fact seems chiefly to rest on the circumstance that Negro women are said to have easy labours. Vrolik, who has bestowed much attention on the structure of the pelvis as indicative of national varieties, observes that the pelvis of the male Negro, in the strength and density of its substance, and of the bones which compose it, resembles the pelvis of a wild beast; while, on the contrary, the pelvis of the female in the same race combines lightness of substance, and delicacy of form and structure: nobody, in fact, on a first view, would suppose it to belong to the same nation as the corresponding part in the skeleton of the male. Yet the pelvis of the Negress has an elongated character, which likens it to that of the simiæ. The ossa ilii have a peculiar configuration. The summit of the inclined plane, which in the European is in the middle of the crest of the ilium, between the anterior and upper spine and the posterior and upper tuberosity, is situated in the Negress immediately above the posterior and upper tuberosity; being thus as remote as possible from its situation in the European. The anterior upper spines are placed lower in relation

to the cotyloid cavities, and are also less prominent. The anterior and lower spines are nearer to the edge of the cotyloid cavity than in the European pelvis, in which a greater distance is here to be observed. The length of the antero-posterior diameter, at the inlet, is great in comparison with the transverse.

In the Hottentot.—In the Bushman and Hottentot females, the breadth of the pelvis is about half an inch less than the pelvis of European women. The height is, on the contrary, much more considerable than in the latter; the ilia reach up beyond the level of the half of the fourth lumbar vertebra. The neck of the thigh-bone in the Bushman female is shorter than in Europeans, or even than in Negroes, and it has a more oblique direction.

In the Javanese.—M. Vrolik describes the pelvis of the Javanese as peculiarly light, small, and nearly circular in its upper cavity. He gives figures of this part in the male and female. From a first or hasty view of these, he says, any person would suppose himself examining the bones of a very young person, and nothing but the observation of those decisive characters indicative of full maturity would be capable of dissipating the impression. The muscles and their attachments are also inferior in every respect to those observed about the pelves of Negroes, Europeans, and Hottentots.

Professor Weber reduces all the various shaped pelves to four:

1. The *oval* form, where the antero-posterior diameter in the male is 3 in. 9 lines, and the transverse 4 in. 3 lines. This is the form of pelvis which is most frequently met with amongst Europeans.

2. The *round* form: this appears to be rather a modification of the oval, the conjugate diameter being somewhat longer than in the preceding form. It is said, however, to be the most frequent shape in the American nations.

3. The *square* form of pelvis—where the upper opening forms nearly a perfect square—the transverse diameter, however, somewhat longer than the conjugate; this is chiefly met with in people resembling the Mongolians.

4. The wedge shaped or *oblong* pelvis, where there is an appearance of compression on both sides, so as to be narrower laterally than from front to rear. The conjugate diameter exceeds the transverse by some lines. It is said to be characteristic of the races of Africa.

It is right, however, to add, that Professor Weber is by no means so sanguine as M. Vrolik, as to the possibility of distinguishing varieties of the human species by the character of the pelvis. His deliberate opinion is, that every form of the pelvis which deviates from the ordinary type, in whatever race it may occur, finds its analogues in other races of mankind.

Other parts of the skeleton in different races.—There have been found six lumbar vertebræ in some Negro skeletons. But Dr. Prichard says he has seen the same variety in an European; and Mr. Owen has noticed an approximation to it in an Australian skeleton. The chest is often more arched and expanded in the Negro than the European. Soemmering notices a curious circumstance in connexion with this fact—namely, that in Negroes the eighth rib, or first false one, more nearly approaches the sternum than in Europeans: in one instance he found eight ribs attached to that bone. It is proper to mention that the same variety of structure has been met with in Europeans.

A certain peculiarity is said to have been observed in the fore-arm of the Negro, that part being longer, in proportion to the humerus and the stature, than in Europeans. But the authority for this fact is rather doubtful; nor is the difference of length, even on the shewing of the assertors, very considerable.

The Lascars and Indian sailors who visit England occasionally, are observed to have slender and elongated limbs. Length of the arms and legs, and smallness of the hands and feet, have been remarked as characteristic of the Hindoos. The natives of Van Diemen's Land, and of New Holland, are likewise small in stature, with long and slender legs.

The bones of the leg in Negroes, according to Soemmering, appear to be bent outwards, under the condyles of the femur, so that the knees stand further apart, and the feet are turned more outwards, than in Europeans. The observation is confirmed by Mr. Lawrence's account of the cast of a Negro in the museum of the College of Surgeons:—"The tibia and fibula are more convex in front than in Europeans. The calves of the legs are very high, so as to encroach upon the hams. The feet and hands, but particularly the former, are flat; the os calcis, instead of being arched, is continued nearly in a straight line with the other bones of the foot, which is remarkably broad." The foot of the black is commonly observed to be very large, and the hand to be remarkably thin; the fingers and toes at the same time possessing great flexibility.

Varieties of Structure affecting Families.

Peculiarities of structure which are hereditary in some families, are well deserving the attention of the medical jurist; they are excellent marks by which to determine the identity.

Among these, *supernumerary fingers* and *toes* are not unfrequently met with. Maupertius states that there were two families in Germany distinguished through several generations by six fingers on each hand, and the same number of toes on each foot. Jacob Ruhe, a surgeon, was one of this stock. His mother had married a man of the ordinary make, and bore him eight children, four of them partaking of her peculiarity. Ruhe transmitted his supernumerary members to his offspring.

Dr. Prichard cites from the Edinburgh Medical and Surgical Journal a very curious example of this peculiarity. In a family at Iver the individuals for nine generations had perfect thumbs, but instead of fingers had only the first phalanx of each, and the first and second joint of the ring finger of the left hand; these rudiments of fingers having no nails. It is added, that it was the women only who had the misfortune of entailing this defect upon their offspring, which they did almost uniformly.

These must be considered as curious instances of variety of structure, not referrible to any original difference transmitted from first parents, but arising in breeds previously destitute of any such character; and when once arisen, becoming permanent in the stock. They serve to throw some light on the origin of the three varieties of the human race already described.

Sir Anthony Carlisle, in the Philosophical Transactions for 1814, gives an account of a family in which six fingers on each hand, and six toes on each foot, were transmitted through four generations. The originator of the peculiarity was a female of this conformation: she had ten children like herself, and an eleventh, who only differed from her in having one hand naturally formed.

Fig. 14.

Here is a representation of the feet of a young man who was not long since a patient of Mr. Arnott's in the Middlesex Hospital. He had seven toes on the left foot, and six on the right. Each of the toes had the proper number of phalanges, provided with distinct tendons. There were, however, but five metatarsal bones; two toes being articulated to the first metatarsal bone of each foot. In the left foot there were, besides, two toes articulated to the last metatarsal, as represented in the drawing.

The hands of this person were furnished originally with fourteen fingers, but two of them had been cut off from each hand in infancy. It is remarkable, that the patient had five brothers and four sisters, all of whom, with the exception of one sister, had the sextuple peculiarity on their hands and feet; the said sister, however, having had *seven* toes on one foot, and six on the other. The peculiarity in this instance also seems to have descended by the female side.

IDENTITY.

We may now proceed to a subject more immediately practical—that of identity—in the discussion of which we shall see how the various peculiarities respecting Age, Sex, and the other relations already treated of, may be rendered available for the purposes of medico-legal research.

The aid of the medical jurist is sometimes required to elucidate difficulties arising from a confusion of persons, and in the absence of moral and

circumstantial evidence of a satisfactory nature, the proofs of identity shall rest altogether on the physiological facts which the medical man can supply. The determination of questions of this nature is generally fraught with public good, as it always is with interest for the public. It reveals impostors, or it enables the rightful owners of property to become the actual possessors: it rescues the innocent, while it brings his guilt home to the criminal.

The question of Identity may be raised either with reference to living parties, or to persons found dead. In coroners' inquests, the very first step of the proceedings consists in identifying the body, or such remains of it as are forthcoming. When the Dowager Marchioness of Salisbury was burnt to death lately, in the great fire at Hatfield-house, after digging for several days incessantly in the ruins, some of her remains were found; these were identified by the jaw-bone, in which were certain golden sockets for her artificial teeth.

Another legal arrangement connected with this subject is, that where a prisoner after conviction escapes and is re-taken, a jury shall be empanelled to try the collateral issue, namely, the *identity* of his person, and not whether he is guilty or innocent, for that is supposed to have been fully tried before.

I shall divide the subject of Identity as it relates to the living and to the dead.

Identity of Living Persons.

Family likeness is a thing of ordinary occurrence: the only wonder is that it is not oftener carried to such an extent as to confound identity. Instances, however, are occasionally met with in which brothers are so alike as to defy distinction. The following case, related by Risdon in his History of Devon, is worth quoting for its singularity:—

"Nicholas and Andrew Tremayne were twins, and younger sons of Thomas Tremayne, Esq. of Culloreumbe, in this county. They were so like in all their lineaments, so equal in stature, so coloured in hair, and of such resemblance in face and gesture, that they could not be known the one from the other—no, not by their parents, brethren, or sisters, but privately by some secret mark, or openly by wearing some several coloured riband, or the like, which in sport they would sometimes change, to make trial of their friends' judgment, which would often occasion many mirthful mistakes. Yet somewhat more strange it was, that they agreed in mind and affection as much as in body; for what one loved the other desired; so, on the contrary, the loathing of the one was the dislike of the other. Yea, such a consideration of inbred power and sympathy was in their natures, that if Nicholas was sick and grieved, Andrew felt the like pain, though they were far distant and remote from each other; this, too, without any intelligence given to either party. And what is farther observable, if Andrew was merry, Nicholas was so affected, although in different places, which they could not long endure to be, for they ever desired to eat, drink, sleep, and wake together. So they lived, and so they died. In the year 1564 they both served at Havre de Grace, where they differed, indeed, in outward circumstances, one being a captain of horse, the other a private soldier. Being both to the last degree brave, they put themselves into posts of greatest hazard. At length one of the brothers was slain, and the other instantly stepped into his place, and there in the midst of danger, no persuasion being able to remove him, he also was slain."

But not only individuals of the same family, but persons no way related, have borne an extraordinary resemblance to each other. I shall not waste your time in recounting any of the old stories to be met with in books relative to this subject—many of them bordering on fable; but I may cite a few instances which have a more immediately medico-legal import. A gentleman of the name of Douglas had a narrow escape of being tried for his life some years ago, in consequence of the strong likeness he bore to Page the highwayman. He was committed to prison on the positive oath of a person whom Page had robbed.

Mr. Amos relates a remarkable case which occurred under his own observation at Warwick a few years ago. "A man was indicted for burglary, accompanied with great violence and cruelty, and the prisoner's person was identified by the woman whose house was robbed, and who described particularly the clothes he had on. Being told that the prisoner's life depended on the evidence she was giving as to his identity, the witness turned round towards the box, and having surveyed the prisoner very deliberately for some minutes, said 'that is the man.' On this one of the principal officers of the Birmingham police said, that he thought she was mistaken, and that she had been deceived by the appearance of another prisoner, who had had sentence of death passed on him the day before for another burglary, very like this in its circumstances, and that he was led to think so, as well from the strong resemblance between the two persons as from the circumstance that the dress the woman described was precisely the dress of the other man;

whereas the prisoner, who was a bad character, and had been for some time under the surveillance of the police, never wore such a dress. The other man was then produced in court, and the likeness appearing very remarkable, the jury acquitted the prisoner; though at one period of the trial nobody in court thought that there was the slightest chance of the prisoner escaping being executed*."

Cases are very numerous illustrative of the mode in which identity of the living has been contested and ascertained. One or two of these I may cite for you by way of example. The first is that of Baronet — a remarkable case from the *Causes célébres*, frequently quoted, and which for that reason I shall despatch briefly.

Remi Baronet was born in the year 1717, in the diocese of Rheims. At the age of 25 he left his home to seek a livelihood, and it was not till twenty-two years afterwards that he returned to his native village to look after some little property which he had heard he was entitled to. In the meantime his sister, the widow Lamort, was in possession: she disputed the claim of the new comer—denied that he was her brother—and charged him with being an impostor. She went further. There was a man in the neighbourhood whose son was absent for many years. The woman Lamort, through the agency of her friend the Curé, succeeded in persuading this man that Baronet was his son, and he was induced to recognize the claimant. Babilot was the name of the old man who claimed Baronet for his son. In short, the widow conducted her plot so cleverly, that the unfortunate Baronet was condemned to the galleys for life, as an impostor.

On passing through Paris, on his way to the place of punishment, he was visited eagerly by the sister of the younger Babilot, the man who he was supposed to be. But the woman, the moment she saw him, denied that he was her brother: he was a much older man, she said; nor was he as tall as her brother, nor so well made. However, two years of the sentence expired in the labour of the galleys, when, at length, people began to think that it was possible the decision had been too hasty. An order for the revision of the sentence was procured, and the medico-legal investigation of the matter was committed to the celebrated Louis. He, upon examining the circumstances on all sides, found that there were five capital points of distinction between the two men. 1. Baronet—the rightful claimant—if he were forthcoming, should be 66 years old; and the age of the convict appeared to amount to that number (here you will observe that the point of age was the first taken into account) — while Babilot should be no more than 46. 2. Babilot was a straight handsome man, and had been a soldier. Baronet was round-shouldered, and not much above five feet high. 3. It was known that Babilot had a nævus maternus on his thigh; this Baronet had not. 4. Baronet was lame, had clumsy feet, and large ankles; Babilot was just the reverse. And 5. Both Baronet and Babilot were known to have scars on their cheek and throat: but Baronet, in addition, had one on his eye-brow, which corresponded with the appearance of the convict.

The consequence of this well-conducted inquiry was, that an act was passed to reverse the sentence of the condemned claimant: the widow was deprived of the property, and Baronet was reinstated in all his rights as a good citizen.

The newspapers last year contained a short account of a case of mistaken identity, in some respects very like that just quoted. A man was hanged eight years ago, as Daniel Savage, the murderer of a female. The brother of the murdered woman was the only witness to identify the accused, and his evidence was vague. He had observed a cut on the check of the murderer, and there was found one on the chin of the prisoner. *After* sentence, up to the last moment, the convict persisted in declaring his innocence. It appears that the real name of this person was Edmund Pine—that he was subject to epileptic fits—and was of weak mind. When apprehended and examined before the magistrates, he was asked was he Daniel Savage; he answered "yes;" and gave the same answer to every question put to him. Furthermore (as in the *Baronet* case), the sister of the real Daniel Savage was admitted to see the prisoner, when in his cell under sentence of death; but on seeing him, she immediately exclaimed that that was not her brother.

A lamentable case of a similar description occurred in this country in the year 1749. One Richard Coleman was executed for a rape and murder committed on a woman named Ann Green. Coleman was convicted on the dying declarations of the prosecutrix; but his innocence was fully established two years after his execution, when another person was hanged for the same offence, upon the clearest evidence. The fatal mistake was obviously one of identity, such as persons are very liable to fall into when their senses are confused by bodily suffering, or the heat of passion.

Foderé relates a curious case, which

* Medical Gazette, vol. viii. p. 36.

shews how cautious we ought to be in admitting even the evidence of eye-witnesses under certain circumstances. Two soldiers who were drunk got into a scuffle with some townspeople in the street: one of them presently left the ground, and his companion who remained happened to kill a man. Both soldiers were taken up, and a number of eye-witnesses designated as the murderer the man who withdrew. Justice was unable to come at the truth—yet the alleged murderer was condemned to be executed, and would have been so, had not the prisoners, in their respective hopes of obtaining mercy, where there was so striking a want of positive and consecutive evidence, confessed themselves which was the real criminal.

A CONCISE AND POPULAR VIEW

OF THE

MINUTE ANATOMY OF THE LIVER;

AS DESCRIBED BY

F. KIERNAN, ESQ. F.R.S.

(*From his paper in the Philosophical Transactions, with the approbation of the Author*.*)

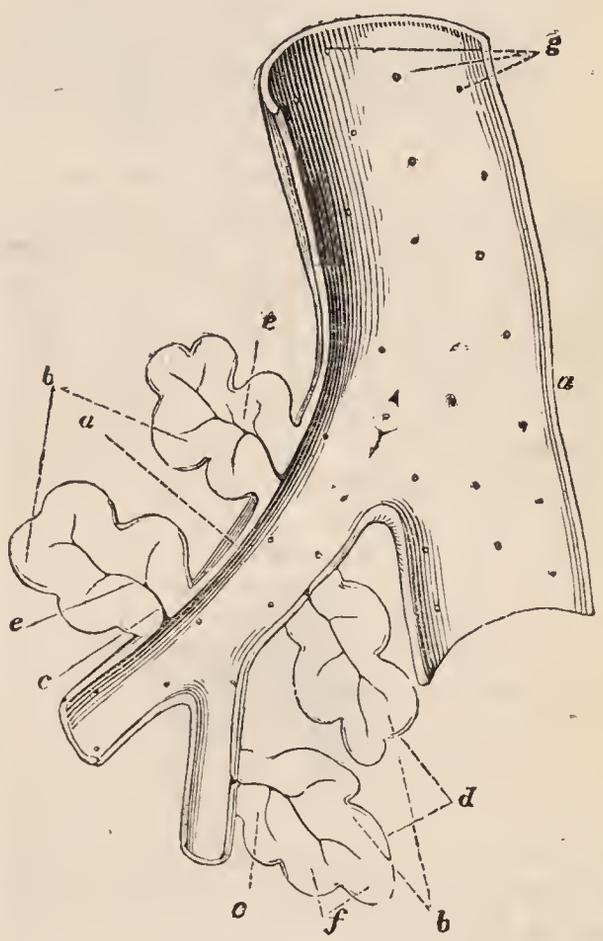
We have already laid before our readers Mr. Kiernan's elaborate and valuable paper, but we have received from so many correspondents applications for explanations of particular points, that we are quite satisfied some difficulty is found in fully understanding the author's views. We have endeavoured to give the chief points in a detached form, in such manner as we hope will render the importance of Mr. Kiernan's investigations more generally appreciated, still, however, referring to the paper itself, as contained at pages 324, &c. of vol. xv., for more complete and satisfactory details. We may add, that the present abstract has been seen by Mr. Kiernan, who has permitted us to express his approval of its accuracy.

SURFACES OF THE LIVER.—The liver has three surfaces—viz. 1st, the *external*, commonly so called; 2dly, the canals or perforations which contain the larger branches of the portal vein, hepatic artery, and hepatic duct, and called the *portal surface;* 3dly, the canals which contain the hepatic veins—the *hepatic-venous surface.*

SUBSTANCE OF THE LIVER.—This is made up of lobules, vessels, nerve, and cellular tissue prolonged from the capsule of Glisson.

LOBULES OF THE LIVER.—These are small bodies, based on certain branches of the hepatic vein, and bounded by a fine cellular expansion and plexus of vessels. The subdivisions of the hepatic vein are likened to the branches of a tree, and the lobules to leaves without foot-stalks resting upon them, as in fig. 1, which represents a magnified longitudinal section of a small hepatic

FIG. 1.



vein (*a a*), with lobules also divided longitudinally, and having a foliated appearance (*b b*).

The lobules are packed close together, but being of various shapes, and generally more or less rounded, they leave interstices between them, which are called the interlobular spaces (fig. 3, *b*), while the part where the flat surfaces appear to touch, are called the interlobular fissures (fig. 3, *c*). The lobules constitute the secreting portion of the viscus; each has its own system of vessels, and may be regarded as an independent gland.

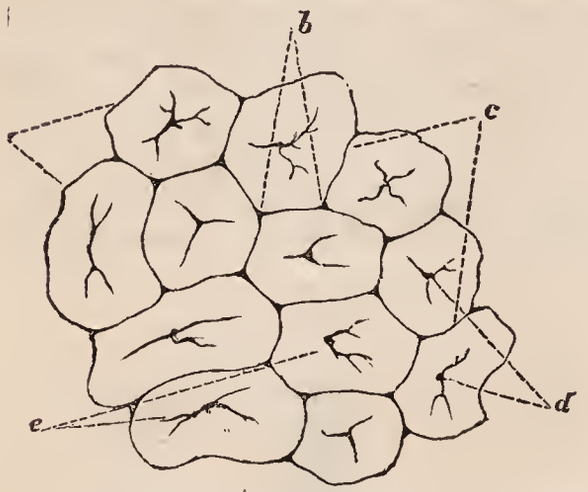
VESSELS OF THE LIVER.—These are

* And now reprinted at the request of several correspondents, who were unable to procure our abstract in a separate form, or without purchasing the volume (xv. MED. GAZ. 480) in which it originally appeared.—ED. GAZ.

the hepatic vein, the hepatic artery, and vena portæ; to which may be added the hepatic duct.

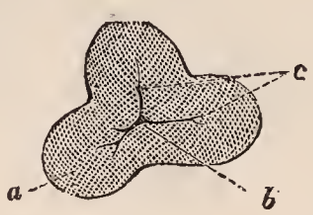
Hepatic Vein.—The larger branches of this within the liver are called *hepatic-venous trunks;* the smaller branches, on which the bases of the lobules rest,

Fig. 3.



are called *sub*lobular veins: each lobule, where it rests on the sublobular vein, is perforated by a minute ramule; and this little vessel, which occupies the centre of the lobule, is called the *intra*lobular vein (see fig. 1, *e e*). When the lobule is cut across, this vein is seen to ramify from the centre towards the circumference (see fig. 2, *b*, *c*). The

Fig. 2.

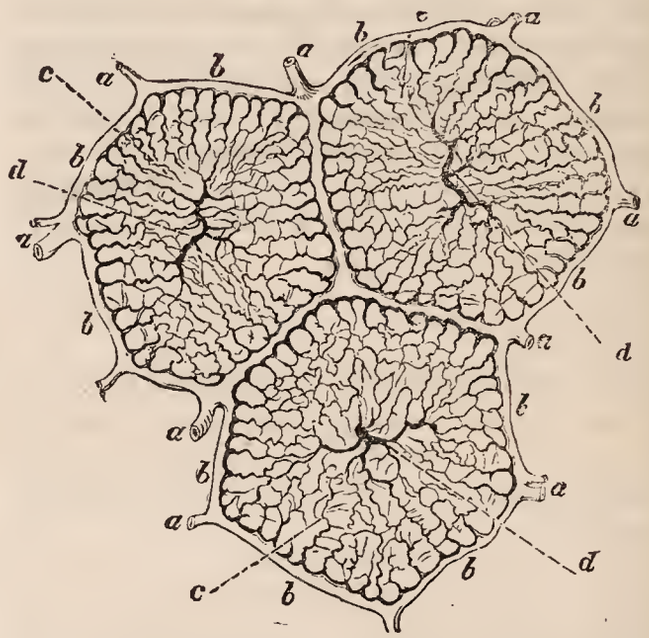


intralobular vein of one lobule has no communication with that of another, but returns its blood exclusively into the sublobular vein.

Hepatic Artery.—This artery, which follows the ramifications of the portal vein and hepatic duct, is distributed exclusively on the vessels and other textures of the liver, for their nourishment. Its blood is then collected by minute veins, and carried into ramifications of the portal veins, where, being now venous blood, its farther course becomes the same as that of the vena portæ.

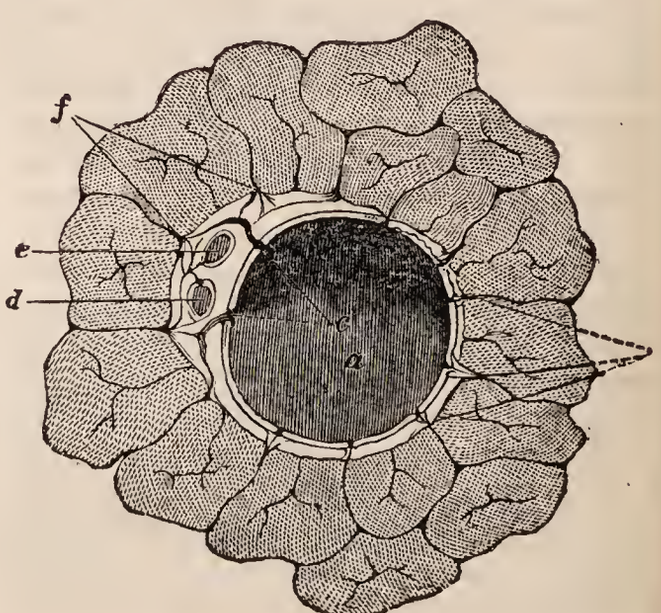
Portal Vein.—The ultimate destination of this is the spaces and fissures between the lobules, whence it is distributed to each particular lobule ramifying from the circumference towards the centre. The branches of the vena portæ running between the lobules are called the *inter*lobular veins (fig. 7, *b b b*). The minuter ramifications within the lobule are called lobular venous plexuses (fig. 7, *c c c*), and these last inosculate towards the centre with the *intra*lobular

Fig. 7.



ramules of the hepatic vein (fig. 7, *d d*). The *inter*lobular veins of one lobule communicate freely with those of the adjoining lobules (fig. 7, *a a*: three lobules are here represented). The larger branches of the portal vein are not in contact with the interlobular spaces on the surface of the portal canals, but are surrounded by a capsular investment, in common with the hepatic artery and duct. In such situations the three vessels just named send forth branches, which form plexuses in the sheath surrounding them; and these are called the *vaginal* branches and

Fig. 4.



plexuses. They in turn give origin to *inter*lobular branches. The smaller portal branches are in contact with the interlobular spaces, except where the duct and artery (which always accompany them), interpose. From that part of the circumference of each vein which is in direct contact with the interlobular spaces, interlobular veins are given off *directly*, but at the other part vaginal branches first arise.—See fig. 4, which represents a transverse section of such a portal canal, containing the vein (*a*), the duct (*d*), and the artery (*e*). On one side the interlobular branches are seen arising from the vein directly (*b*), while on the other side vaginal branches are seen to arise (*c*), and afterwards to subdivide.

Hepatic Duct.—The lobular plexuses of the portal vein (see fig. 7) are accompanied by ducts, to carry away the bile

Fig. 5.

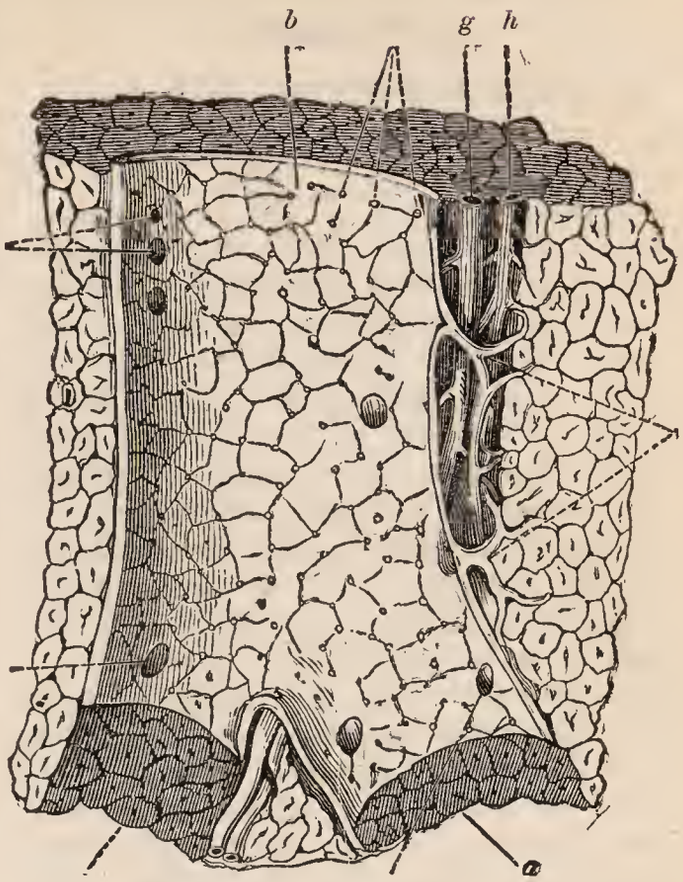
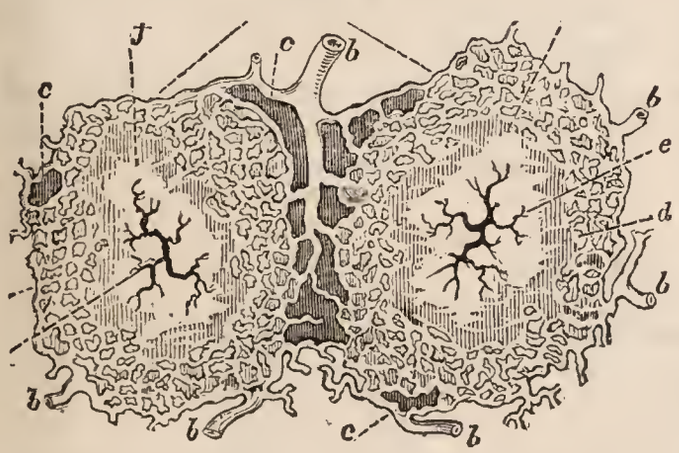


Fig. 6.



as it is secreted. These are seen with a microscope as minute yellow points when a lobule is cut across, and constitute the acini of Malpighi.—Fig. 6, *b b*, interlobular ducts; *d*, lobular biliary plexuses; *e*, *intra*lobular or hepatic vein.

Capsule of Glisson.—This is a cellulo-vascular membrane, in which the vaginal, interlobular, and lobular branches of the portal vein, hepatic duct, and hepatic artery, divide and subdivide: it lines the portal canals, enters the interlobular fissures, and forms the capsules of the lobules; nay, it enters the lobules with the blood-vessels: and these several parts of the capsule are called *vaginal*, *interlobular*, and *lobular* portions respectively.

The portal canals, then, are occupied by the portal vein, hepatic artery, biliary duct, absorbents, nerves, and the capsule of Glisson. A general idea of the arrangement may be gathered from the above cut, which represents a longitudinal section of a small portal vein:—*b*, the vein, which occupies by much the largest space; *g*, the duct; *h*, the artery—all of which are seen giving off vaginal branches; the fine tissue of the capsule investing the whole.

Sometimes one set of the vessels above described is in a state of congestion; sometimes another. When the *intra*lobular veins are congested, the centre of each lobule appears of a more or less dark red, while the circumference is of a yellow colour: when the *inter*lobular veins are congested, the circumference is dark and the centre lighter. The former is called *hepatic* venous congestion, the latter *portal* venous congestion. Both may exist together, and then the liver shews an uniformly dark colour. In *hepatic* venous congestion, which is by much the most common, the dark portions are detached; but in *portal* congestion they may be continuous. Considerable modifications take place in the aspect of the mottled appearance, according as one or other of these forms of congestion preponderates, and according as it is general or partial; but no such thing exists as the medullary, cortical, red, yellow, or other analogous substances, described by previous anatomists (by all of them, indeed, except Professor Müller, of Berlin), and on the supposed existence of which Andral has based his morbid anatomy of the liver.

STATISTICS OF SUICIDE IN ABERDEEN.

By Francis Ogston, M.D., &c.

(For the Medical Gazette.)

In Aberdeen, from 1826 to 1835 inclusive, the histories of fifty-two persons have been learned, who, in this period, have seriously attempted suicide: of these, thirty-eight have been actual suicides. Contrary to what might have been expected, the number of serious attempts was the same in females as in males. The fatal cases amongst the former amounted to sixteen, while, amongst the latter, we find twenty-two instances of the same. In men, we thus perceive that the actual were, to the attempted suicides, as 22 to 26, or as 1 to 1·18; in females, as 16 to 26, or as 1 to 1·62. Taking the returns of the census of 1830, as the mean of population during the ten years fixed upon (which gives the amount of the inhabitants of Aberdeen, including Old Machar, at 58,019), we have thus one attempt at suicide annually in every 11,157·5 inhabitants, including strangers who had resided here for short periods. Calculating in the same way, there would be one actual suicide in every 15,268·15; a result which, compared with other places, cannot be considered otherwise than as very favourable for Aberdeen. But if we exclude strangers who have not had other than temporary residence, the result will be still more flattering; affording only one attempt at self-destruction annually, in every 14,168·29 of the fixed inhabitants, and one actual suicide yearly in every 20,006·55 of the same. As, however, instances occur which cannot be known, particularly in families amongst the better classes, the former calculation must be nearer the truth. We are not aware of any bills of mortality being kept in Aberdeen prior to 1833. In that year, an account of the deaths for eight months are in our possession. Taking the average of these, which gives one death in forty-seven inhabitants yearly, we have one actual suicide in 318·94 deaths.

We shall arrange the details which we have collected, connected with these cases, under different heads:—

1. *Age and Sex.*

The average age of 52 attempted suicides	36·19	years.
The ditto ditto of 26 male attempted ditto	41·15	—
The ditto ditto of 26 female ditto ditto	31·28	—
The ditto ditto of 22 male actual ditto	43·22	—
The ditto ditto of 16 female ditto ditto	34·25	—
The ditto ditto of 4 male incomplete ditto	29·75	—
The ditto ditto of 10 female ditto ditto	26·40	—

Or arranging them in quinquennial periods, we have—

Of Attempted Suicide.

	Cases.	Males.	Females.
From 16 to 20 inclusive	5	1	4
— 21 to 25 ditto	12	4	8
— 26 to 30 ditto	11	5	6
— 31 to 35 ditto	4	2	2
— 36 to 40 ditto	4	3	1
— 41 to 45 ditto	2	1	1
— 46 to 50 ditto	3	2	1
— 51 to 55 ditto	3	3	0
— 56 to 60 ditto	5	2	3
— 61 to 65 ditto	1	1	0
— 66 to 70 ditto	2	2	0
— 16 to 70 ditto	52	26	26

Of Actual Suicide.

	Cases.	Males.	Females.
From 16 to 20 inclusive	2	1	1
— 21 to 25 ditto	7	3	4
— 26 to 30 ditto	7	3	4
— 31 to 35 ditto	3	1	2
— 36 to 40 ditto	4	3	1
— 41 to 45 ditto	2	1	1
— 46 to 50 ditto	3	2	1
— 51 to 55 ditto	3	3	0
— 56 to 60 ditto	4	2	2
— 61 to 65 ditto	1	1	0
— 66 to 70 ditto	2	2	0
— 16 to 70 ditto	38	22	16

The age at which the greatest number of attempts at self-immolation happens, is thus from 21 to 25 inclusive; next in frequency are the five years from 26 to 30. The periods at which the greatest proportion of actual suicides take place, are from 21 to 30 inclusive. Amongst the men, the greatest number of attempts are from 26 to 30; amongst the women, from 21 to 25 inclusive. It is worthy of remark, that after the age of 35 (with one exception), no ineffectual attempt was made; and that a difference is observable in this respect between the sexes, fewer failures occurring in men than in women.

2. *Mode of Death.*—Attempted Suicide.

	Cases.	Male.	Female.
By Drowning	19	7	12
— Poison	11	2	9
— Hanging	9	6	3
— Cutting Instruments	6	6	0
— Fire-Arms	3	3	0
— Strangulation	2	1	1
— Precipitation	1	0	1
— Exposure to Cold	1	1	0
Total	52	26	26

Actual Suicide.

	Cases.	Male.	Female.
By Drowning	13	6	7
— Hanging	9	6	3
— Poison	6	2	4
— Cutting Instruments	3	3	0
— Fire-Arms	3	3	0
— Strangulation	2	1	1
— Precipitation	1	0	1
— Exposure to Cold	1	1	0
Total	38	22	16

From these tables we perceive that attempts to take life by fire-arms, and by cutting instruments, are confined, as might have been anticipated, to males, —poison and drowning being the modes most frequently chosen by the females. The poison selected was laudanum, except in one case, where corrosive sublimate was swallowed. The throat was cut in five out of the six attempts by cutting instruments.

3. *Assigned Cause.*

	Cases.	Male.	Female.	Fatal.	Uncompleted.
Love disappointments	11	3	8	6	5
Family quarrels	8	3	5	8	0
Mental depression	6	2	4	4	2
Insanity	9	6	3	6	3
Melancholy	4	2	2	4	0
Deranged affairs	4	4	0	4	0
Intoxication	2	1	1	0	2
Detection in theft	1	1	0	1	0
Religious melancholy	1	0	1	1	0
Drunken quarrel	1	0	1	0	1
Temporary excitement	1	0	1	0	1
Dissipation	1	1	0	1	0
Poverty	1	1	0	1	0
Dread of punishment	1	1	0	1	0
Cause unknown	1	1	0	1	0
Total	52	26	26	38	14

4. *Occupations.*—1. Females.

	Cases.	Fatal.	Uncompleted.
Prostitutes	11	5	6
Manufactory servants	4	2	2
House servants	2	2	0
Paupers	2	2	0
Farm servant	1	0	1
Dress-maker	1	1	0
Tradesmen's wives	3	3	0
Unknown	2	1	1
Total	26	16	10

2. Males.

	Cases.	Fatal.	Uncompleted.
Weavers	4	3	1
Soldiers (including 1 pensioner)	3	3	0
Labourers	3	2	1
Shoemakers	2	2	0
Wrights	2	1	1
Tinsmiths	2	1	1
Blacksmith	1	1	0
Hairdresser	1	1	0
Seaman	1	1	0
Carter	1	1	0
Painter	1	1	0
Teacher	1	1	0
Baker	1	1	0
Shopkeeper	1	1	0
Writer	1	1	0
Unknown	1	1	0
Total	26	22	4

5. *State—Married or Single.*

Of the attempted suicides, 19 were married, 2 were widows, 1 was a widower, and 30 were single. Of the state of one of these last, there was doubts. Of these, 12 men were married, 1 was a widower, and 13 were unmarried. Of the women, 6 were married, 2 were widowers, and 18 were single. Or, the married (including widows and widowers) were to the unmarried as 22 to 30, or as 1 to 1·36. The married men (including the widower) and the single men were in equal numbers, while the married women (including the widows) were only to the unmarried females as 8 to 18, or as 1 to 2·25. Of the whole number of attempted suicides, it was known that 26 had no children, and that 16 had families. The average number of children amongst these, was 3 to each.

6. YEARS.

1. *Attempted Suicides.*

	Male.	Female.	Total Cases.
1826	1	3	4
1827	2	1	4
1828	3	2	5
1829	1	2	3
1830	2	3	5
1831	4	3	7
1832	1	3	4
1833	2	6	8
1834	5	1	6
1835	4	2	6
From 1826 to 1835, inclusive.	26	26	52

2. *Actual Suicides.*

	Males.	Females.	Total Cases.
1826	1	2	3
1827	3	0	2
1828	3	1	4
1829	1	1	2
1830	2	2	4
1831	4	2	6
1832	1	2	3
1833	1	4	5
1834	4	0	4
1835	3	2	5
From 1826 to 1835 inclusive.	22	16	38

The yearly average of the first table is 5·2; of the first five years of the same, 4·2; and of the last five years, 6·2; shewing thus an average of the attempts at self-destruction in this city.

The second table exhibits also an increase of actual suicides, the annual average for the 10 years being 3·8; the average yearly number for the first five years, 3; and of the last, 4·6.

7. MONTHS.

1. *Attempted Suicides.*

	Cases.		Cases.
January	4	July	8
February	4	August	9
March	4	September	2
April	2	October	6
May	1	November	2
June	6	December	4
	21	Total	52

2. *Actual Suicides.*

	Cases.		Cases.
January	4	July	3
February	3	August	6
March	3	September	1
April	2	October	6
May	1	November	2
June	4	December	3
	17	Total	38

From both tables, it will be seen that the last six months of the year predominate over the first, while August stands highest in each, and May lowest.

8. DAY OF THE WEEK.

1. *Attempted Suicides.*

	Cases.		Cases.
Sunday	8	Thursday	6
Monday	9	Friday	11
Tuesday	7	Saturday	4
Wednesday	5	Unknown	2

2. *Actual Suicides.*

	Cases.		Cases.
Sunday	6	Thursday	4
Monday	8	Friday	6
Tuesday	7	Saturday	4
Wednesday	2	Unknown	1

A reason may be assigned for Fridays standing so high in the first table. Tradesmen's wages are usually paid

here on the Thursday night, after which scenes of intemperance are very common. Many also receive their weekly pay on Saturday night, which is also often a period of drunkenness and riot, Sunday being occasionally spent in the same manner. Two of the week-day cases occurred on days of public worship, and must therefore be added to the religious festivals, in both tables.

The cases were arranged according to the days of the month in which suicides were attempted, or actually perpetrated; but no generalizations could be obtained from these, the instances being pretty equally divided amongst the different days.

It may deserve notice, that of 43 cases of attempted suicide, in which an approximation to the time was obtained, 29 took place in the hours from noon to midnight, and only 14 between midnight and noon Of 32 cases of actual suicide, 20 were accomplished during the former, and only 12 during the latter twelve hours.

9. *Religion.*

Our information on this subject, and that which next follows, is less complete, and less to be trusted, than on the points which precede, and must therefore be received with caution. Of the 52 persons who attempted suicide, 14 attended no church; 13 frequented the Established Church; 2 the Methodist Chapel; 2 the Episcopalian Churches; and 1 the Relief. Of 20, nothing was known in this respect. On a very rough estimate (the respective numbers being unattainable at present with any thing like rigid accuracy), the attempts at self-immolation would be as 1 to 1384 of those attending the Established Church; as 1 to 900 Episcopalians; as 1 to 300 Methodists; as 1 to 1000 of the Relief Churches; and as 1 to 633 of those attending no church. This last calculation assumes, that one-half of those of whom no information was obtained attended no church.

10. *Place of Nativity.*

Of 41 attempted suicides, occurring amongst the resident population—

33 were natives of Aberdeen.
2 were from the south of Scotland.
2 were from the county of Aberdeen; and of
4 the native place was unknown.

Of the attempted suicides, occurring amongst those who had no permanent residence in Aberdeen—

3 were from the south of Scotland.
2 were from the county of Aberdeen.
1 was a native of England.
1 was from Kincardineshire.
1 was a native of Elgin.
1 was from Morayshire; and of
2 the native place was unknown.

11. *Habits.*

Of the state of 30 out of the 52, whose situation was ascertained previous to the attempt, 20, or two-thirds, were intoxicated (1 from laudanum), and the remainder sober: 17 had the character of habitual drunkards, and an equal number of temperate persons.

12. *Postmortem Appearances.*

We had an opportunity of being present at eight of the postmortem examinations in the above cases of actual suicide. Independent of the morbid appearances peculiar to the mode of death, the following were observed:—

1. The skull in one instance was very thick, and nearly globular; in a second it was also very thick, but much flattened at the sides; while, in a third, it was very thin, with the processes and ridges on its interior unusually sharp and prominent.

2. Different morbid appearances were met with in the brain and membranes. In one case this viscus was very firm, and less dark-coloured than usual. In another instance the brain was very firm; in a third, soft, with bony concretions in each choroid plexus. In a fourth the arachnoid was thickened and opaque, and the cerebellum softened. In a fifth case serous cysts existed in each choroid plexus, while both thalami, one corpus striatum, and the septum lucidum, were broken down into a hard pulp. In a sixth the arachnoid was thickened, with effusion underneath, while the co-mutual surfaces of the hemispheres adhered; the brain generally being firm, but the fornix softened.

3. The following was the state of the heart in two cases:—In one the left ventricle was flaccid and attenuated; in the other it was loaded with fat, its right auricle and ventricle were attenuated, and its left ventricle hypertrophied.

4. In one case the lungs were emphysematous; and in another, generally

hepatized, with a bony concretion in the substance of one lobe.

5. In two cases the liver was hypertrophied; in one being of immense size. In a third the left lobe was softened.

6. In one case the stomach was contracted almost to the diameter of the duodenum.

7. In one instance the ileum was closely and permanently contracted; and in another the larger intestines were also unusually contracted, the mucous coat being in both instances softened.

8. In one case the os tincæ was found closed by glutinous matter; the uterus was as large as in the fifth month of pregnancy; its interior was filled with a downy vascular growth; the fallopian tubes were closed at each extremity, and distended in their middle by a serous fluid; both ovaria were the seats of serous cysts as large as a walnut. This occurred in a prostitute.

9. In one case the spleen was softened. One woman was deaf, and another blind.

In six cases the attempt noted was the second, and in one the third.

Aberdeen, Oct. 15, 1836.

ON THE HYDRATED TRITOXIDE OF IRON AS AN ANTIDOTE TO ARSENIC.

To the Editor of the Medical Gazette.

Sir,

Dr. Bunsen's discovery of the efficacy of the hydrated tritoxide of iron as an antidote to arsenic, seems to have received in this country scarcely the attention which its importance deserves. It is for the purpose of bringing it again before the profession that I send you the following narrative:—

On Wednesday, September 7th, 1836, a man bought a quarter of an ounce of arsenic, and about two o'clock in the afternoon mixed it in a teacup with a quantity of water, stirred it round two or three times rapidly with a teaspoon, and immediately swallowed it; a portion, not more than a quarter of the whole, remained at the bottom of the cup. He then walked out with a person who had unsuspectingly witnessed the proceeding, and who was quite incredulous till the man's altered countenance confirmed his positive assertion that he had taken poison. Nearly a quarter of an hour elapsed before he began to feel sick; he then introduced his fingers into his throat to excite vomiting, and with some difficulty got up a mouthful of a clear fluid. Having reached a house in the neighbourhood, he complained of violent pain and retching; got some salt and water, which he immediately rejected with two or three pieces of potatoe, but the stomach still retained its other contents.

Mr. Sharp, Mr. William Furnival, and myself, saw him soon after three. He was sitting on a chair, with a wild and anxious expression of countenance, and his eyes were blood-shot; he was perfectly collected, and spoke correctly; had burning pain about his stomach and belly, which was swelled so as to have burst the buckle of his belt; violent beating at the heart, and an acid taste in his mouth.

A pint or two of warm water was thrown into the stomach by means of the pump, and on reversing the action of the instrument, a few ounces of fluid came back easily, but the tube became choked up, and was of necessity withdrawn. This was followed by a pretty copious rejection of fluid mixed with potatoes, pieces of which had got into the tube of the pump, and prevented its action. On being cleaned, it was again introduced, and another portion of warm water injected, but the pump, when reversed, still refused to act, and was finally withdrawn. The sickness had ceased, and could not be renewed by tickling the fauces. He felt something better after the vomiting.

It will not be thought irrelevant to say a few words on the state of the man at this moment. He had in the morning drunk a glass of rum and several glasses of ale. While under the influence of this liquor, and immediately before taking the arsenic, he had eaten five or six cold potatoes. The exact quantity of arsenic swallowed could not be ascertained, but it must have been a very large dose *. The vehicle in which he took it was one very likely to produce its peculiar effects upon the stomach; it was also evident that the sickness previous to the use of the pump had left the contents untouched, or

* A quarter of an ounce of arsenic sold in the shops equals two drachms and two scruples Apothecaries' weight.

nearly so. The injection of the warm water would still further dilute the fluids already in the stomach; and allowing that a portion of the arsenic was dissolved and vomited *, would not the very dilution facilitate the deposition of the remainder on the mucous membrane?

It was now two hours since the poison had been taken. About six drachms of the carbonate of iron were mixed in water and given to him at twice, one draught immediately following the other. He said his stomach felt cooler; and his pulse, which had been upwards of 130 just before, sank to 112. The pain ceased, or nearly so. He was ordered to bed, and to take half an ounce more of the carbonate in half an hour.

At half-past five I found him asleep, and in a copious perspiration. When he awoke he had no pain; there were occasional sensations of burning in the epigastrium, and strong palpitations; pulse 108; his eyes were still red, and his look anxious. A quantity of the newly-prepared oxide of iron was now administered. In the course of the evening he made a large quantity of clear and healthy urine. The pain continuing under the ensiform cartilage, he had ten leeches applied. He did not sleep. About two in the morning he was seized with violent pain and twisting in the belly, which was followed by vomiting; his bowels acted two hours after, and the urine was abundant. The matter vomited seemed to consist principally of the oxide, but at the bottom of the pot were some pieces of stringy mucus, which might be drawn up the sides amongst the urine; the stool could not be examined. He said he felt sick and worse after taking the physic; occasional heartburn; pulse 90.

On Thursday morning we had more of the prepared oxide, which was more carefully washed than the first. He said it was not so good to take; but he had no more sickness; pulse 75; slight headache. He slept soundly in the night, and early on Friday morning felt an inclination to go to stool, but passed nothing. The oxide was discontinued, and he had an ounce and a half of castor oil, which operated twice. The first stool was of a formed consistence, of a dark green colour mixed with brown, and with several pieces of undigested potatoe in it, exactly like those vomited on Wednesday; the second stool was preceded by some griping, but was not seen. He had some twitching in his head on Saturday, so that, as he said, he was not able to hold it still. Had another stool, of a natural consistence, of a peculiar brown colour, and partially covered with a black shining mucus. His diet during the whole time consisted of gruel, tea, and dry toast.

The best commentary upon this case will be a detail of such experiments and trials as have been made with the oxide of iron since its discovery as an antidote to arsenic.

The history of the discovery is given in a letter from Dr. Bunsen to M. Poggendorf, dated May 1, 1834, which is published in the Journal de Pharmacie for October, 1834. "Having found, first, that pure hydrate of iron precipitates arsenious acid in solution so completely as not to leave a trace of it in the supernatant liquor,—and, secondly, that if a few drops of ammonia be added to the hydrate, and arsenious acid in fine powder be digested with it at a gentle heat, the latter immediately becomes an insoluble arsenite of the tritoxide of iron,"—the Doctor requested Dr. Berthold to experiment on some dogs, and the result was, that in their opinion it is a better antidote to arsenic than albumen is to corrosive sublimate.

Some months after this an accident occurred at Paris which led to much discussion and several series of experiments. Seven horses got some arseniate of potash in their corn; four died before any thing was done; to the other three M. Boulet, a veterinary surgeon, administered the hydrated tritoxide twenty-eight hours after the arseniate: one horse lived three hours, another thirty-six, and the other some days *.

These untoward circumstances gave rise to new investigations, and MM. Miquel and Soubeiran instituted a set of laborious experiments on dogs. After some preliminary trials, from which no

* A part of the fluid with potatoes rejected at this period, after having been boiled and filtered, was subjected to the action of sulphuretted hydrogen gas, and assumed the characteristic lemon tint, but remained perfectly clear.

* Bulletin de Thérapeutique, Oct. 1834. It is remarkable that in the first horse that died (of the seven) no arsenic was found either in the stomach or intestines.

positive conclusion could be drawn, they tied the œsophagus of a dog to ascertain how long he would live in such a state: the animal died in seventy-two hours. They next gave a dog twelve grains of arsenic, and then tied the œsophagus: he lived two hours. Another dog had nine grains of arsenic, and, with the same operation, lived two hours and a half. They now gave a small dog twelve grains of arsenic, and immediately after twelve times as much hydrated oxide of iron. The œsophagus was tied, and the animal left to itself; it tried to vomit. In two or three hours the effects of the poison went off. Twenty-four hours after the ligature was removed, and as the dog could not swallow solid food, some broth and milk was given to it. It died on the sixth day after the operation. In cases where the ligature was not removed, one dog lived seventy-eight, another eighty-four hours. It had the power of retarding death when given two hours after the operation; but when joined with fatty substances it was less efficacious.

After examining the chemical action of the two substances on each other, MM. Miquel and Soubeiran came to the following conclusions: — 1. That M. Bunsen's opinion, that the hydrated oxide of iron is a good antidote to arsenic, is correct. 2. The oxide must be used in excess with regard to the arsenic. 3. It instantaneously neutralizes and precipitates arsenious acid in solution. 4. When the powdered arsenious acid is added to the hydrated oxide diffused in water, its effects are completely neutralized by the oxide; but it recommences its action the moment the oxide is deficient. 5. The oxide will not prevent death when the poison has been long in the stomach. 6. While the oxide prevents any further action of the poison, it is not likely that it will do away the effects already produced*.

Early in March, 1835, M. Boulet, who has been already mentioned, read a paper to the Royal Academy of Medicine (of which he is a member), containing an account of additional trials. The subjects of his experiments were horses. The first got two ounces of arseniate of potash, and immediately afterwards a pound and a half of the protoxide* of iron: the animal lived 57 hours. He now learned that similar experiments, with the same result, had been made at the Veterinary School at Alfort; and M. Lassaigne, one of the experimenters, accounted for their failure by the greater affinity between arsenic acid and potash, than between it and iron. In order to meet this, he tried the sulphate of iron. He gave two ounces of the arseniate, and directly afterwards a pound of the sulphate: the horse lived 63 hours. When M. Boulet mentioned these circumstances to Professor Orfila, the professor thought he had not given a sufficient quantity of the antidote; and in the next experiment he exhibited two ounces of the arseniate, and four pounds of the hydrated peroxide: death took place in 54 hours. A fourth horse had two ounces of the arseniate, and eight ounces of the sulphate of iron, and died in 52 hours.

In all these cases the usual effects of arsenic were found in the intestinal canal; and, moreover, in the two instances where sulphate of iron was administered, there was a serous infiltration between the mucous and muscular coats of the stomach. M. Boulet now gave up the arseniate of potash; and from six different trials found that it required two ounces of the white oxide of arsenic to kill a horse. On the 16th December he gave one, two ounces of arsenic, and immediately after it four pounds of the hydrated peroxide. The horse appeared quite well till the 25th, when he was killed: two ulcers were found in the stomach, one the size of a crown-piece, the other much less. In two other experiments the lesions were even lighter than these; in a fourth, the intestinal canal was found inflamed and swollen in different parts, and an erosion six inches long, and three broad, in the colon, penetrating through the mucous, and having disorganized the muscular coat.

To ascertain how long a time might intervene between the administration of the poison and the antidote, one horse had the former two hours, another four hours, before the latter. Both recovered.

* Bulletin général de Thérapeutique, Dec. 1834.

* It may be stated, that any difference of *terminology* in this article belongs to the original writers of the memoirs quoted.

In another case, the oxide given twenty-five hours after, at the time when the first symptoms of the poison appeared, produced no effect, and the animal died in twenty-four hours. M. Lassaigne analysed separately the contents of the stomach, the small intestines, the cæcum, and the colon, of a horse, which had been killed seventy-two hours after having taken the poison and the antidote, having shewn no symptom of being poisoned, and did not find a trace of arsenious acid any where.

As a summary, says M. Boulet, it seems to follow from these facts—1. That the hydrated peroxide of iron will not counteract the effects of the arseniate of potash. 2. That the sulphate is equally useless. 3. That it requires about two ounces of the arsenious acid to poison a horse, and death constantly follows on the second or third day. 4. That the hydrated peroxide of iron is an antidote to arsenic, and must be exhibited in a much larger dose than the poison. 5. That when it is given with the poison, it generally annuls the effects of the latter. 6. That it does so if given four hours after the poison. 7, and lastly, That it does not prevent death if given a long time after it*.

Drs. G. Borelli and C. Demaria, at Turin, were, about the same time, investigating the powers of the same substance, and published the results in the *Repertorio Medico-Chirurgico del Piemonte*, for March 1835: an abstract of their article is given in the *Bulletin de Thérapeutique* for May, to which I am indebted. Their first experiments were made on rabbits, and were unsatisfactory enough, till they ascertained that fifty grains of the peroxide alone was sufficient to cause the death of one of these animals in six hours. When they experimented on dogs, the consequences were different: in most of the cases the effects were as apparent as in those of Miquel and Soubeiran, and it would be a mere repetition to detail them. In one, six drachms of the tritoxide were given half an hour after fourteen grains of arsenic, and the dog got well; in another, after twelve grains of arsenic, five drachms of the tritoxide, which had been prepared fifteen days before, did not prevent the animal's death in twelve hours. Starch mixed with the tritoxide retarded, but did not prevent its action. In no case was there any free arsenic discovered in the intestines.

These experiments, if not conclusive, were sufficiently satisfactory to induce any observer to try the peroxide in a case of poisoning by arsenic; and accordingly, M. Geoffroy, *officier de santé* in a provincial town in France, gave it to a man named Fouquet, a barber, who, in a fit of delirium tremens, had taken a drachm and a half of arsenic twenty minutes before. In the course of a quarter of an hour he drank five or six pints of hot or cold water, charged with the peroxide: this was followed by copious vomiting, and a large stool. Between six o'clock and two he was continually swallowing the same liquid, vomited thrice, and had as many stools. No symptom of the poison shewed itself, but he was still delirious. After eight hours the quantity of the antidote was gradually diminished, and the following morning (his senses returned gradually) he was convalescent, and asked for breakfast. This man took the oxide prepared from six ounces five drachms of the sulphate of the peroxide of iron, in from twenty to twenty-five pints of water, sometimes hot, sometimes cold*.

On the 13th of August, 1835, five little girls, on their way from school, picked up some pieces of a dry, brown, brittle cake, which had been thrown on a dunghill, and each partook of it, about two o'clock in the afternoon. In half an hour there was more or less vomiting, and the usual symptoms of arsenical poison, inflammatory and spasmodic. At five o'clock they got the tritoxide; the vomiting gradually ceased, the other symptoms subsided, and the next day the patients were all convalescent. The cake had been made two years before, for *rat poison;* and it was calculated that each had taken about thirty grains of the oxide of arsenic. These cases are detailed by M. Bineau, a physician, and M. Majesté, an apothecary, at Saumur†.

Two other cases belong to Dr. Buzorini, and are extracted from the *Medicinisches Correspondenz-Blatt*, in the *Gazette Médicale de Paris*, November

* Bullet. de Thérap. Mar. 1835.

* Journal de Méd. et Chirurg. Pratiques, Sept. 1835.

† Journal des Connaissances Medico-Chirurgicales, Nov. 1835.

1835. The poison was given in coffee, about nine o'clock in the morning, May 26th. Dr. Buzorini did not see the patients till six the following morning; one had suffered severely from ineffectual efforts to vomit; the other had been very sick. These and the other symptoms gradually gave way, and both patients recovered by the end of the month. The quantity of arsenic taken was, in one instance, not ascertained, but eighteen or twenty grains were found at the bottom of the cup; and, in the other, it is stated at thirty-five grains; but no data are given for this assertion.

Such are all the facts which I have been able to ascertain respecting this important discovery. It remains for me to describe the plan of administering the tritoxide in our case. The man, as has been stated, had six drachms of the common carbonate as soon as the stomach-pump was removed, and four drachms in half an hour more; this was done for the purpose of getting time to prepare the new oxide, after the formula used by M. Majesté, in one of the cases already mentioned.

Half an ounce of iron filings was put into an earthenware pipkin, and two ounces each of the muriatic and nitric acids poured upon them. This was put near the fire till the iron was dissolved; half a pint of distilled water was added, and in a few minutes the pipkin was removed from the fire, and an ounce and a half of liquid ammonia poured into it. A fresh addition of water was made, the whole stirred up, and allowed to settle for ten or fifteen minutes. The upper portion was poured off, and more water added, which, when the precipitate had pretty much fallen, was again decanted. The whole of this remainder was put into a bottle, and when we saw the man at half-past five, it was decanted into a basin to within three or four ounces, which formed the dose; and in this way he took half a tea-cupful of the dregs of the liquid every half hour. During Thursday he had it every hour. M. Majesté made use of twice the quantity of iron, &c., and states that from it he obtained twelve ounces of the hydrated tritoxide. M. Lassaigne prepared his tritoxide in the same way, but without the muriatic acid. MM. Miquel and Soubeiran make it with the sulphate of iron, a quantity of which is put into a capsule of platinum, or porcelain, with five or six times its weight of water; when it boils, nitric acid is gradually added till the red fumes cease to appear. The liquor is then diluted, and the oxide precipitated by adding ammonia in excess: it requires washing like the other precipitates. It may be well to observe, that the precipitation takes place sooner in a large quantity of liquid than in a small one.—I am, sir,

Your obedient servant,

JOHN ROBSON,

House-Surgeon to the Warrington Dispensary.

Warrington, Oct. 11, 1836.

ON THE NATURE AND TREATMENT OF ACUTE NEURALGIA, OR TIC DOULOUREUX.

To the Editor of the Medical Gazette.

SIR,

IF you think the inclosed cases, with the accompanying remarks, of sufficient interest to warrant publication, you will oblige me by transferring them to your pages.

They relate to a disease interesting rather from its intensity, than either from its frequency or its danger, in the treatment of which, the medicine employed exhibited its remedial influence in so unequivocal a manner, that I make no apology for intruding them on the attention of your readers.

In the majority of cases of acute neuralgia, or tic douloureux, the pain has been referred to that part of the face involving the distribution of the 2d division of the 5th pair. Emerging as it were from the infra orbit. foram., the pain darts with electric rapidity towards its terminal ramifications, involving many, but limited in its greatest intensity to a few of its branches. When it has existed with severity during a long period, its frequent recurrence appears to involve the ramifications of the nerve which extend in the direction of the mastoid process. This may possibly have led to the belief that the portio dura itself might be the actual and primary seat of the disease—an occurrence which, if I may, without prejudice, determine from my own reasoning, and comparatively limited experience, appears to me, to say the least, highly improbable. My own experience has never furnished me with a case in which

the pain of acute neuralgia, arising in the neighbourhood of the stylo-mastoid foramen, extended itself along the track of the portio dura with the rapidity or the intensity with which it attacks the 5th pair. Doubtless, a certain amount of pain attends that frequent morbid condition of the portio dura which is the precursor and attendant on paralysis of the face: at least I have seen no example of the latter affection in which pain in that region has not been both a precursor and an attendant symptom. But in the latter description of case may not the nerve be secondarily affected, and is not the temporary suspension of its function referrible to the pressure of the surrounding parts, inasmuch as it invariably yields under the influence of local depletives and counter-irritants? If acute neuralgia consist in an inflammatory condition of an affected nerve, is it reasonable to expect that the ordinary signs of inflammation should be absent? Is it reasonable to attribute to the effects of inflammation, or to inflammation itself, a condition of nerve which admits of almost instantaneous mitigation from the use of remedies, highly aggravative of inflammation in other parts?

Do we possess any experience with which we can determine the amount of pain arising from actual inflammation of the portio dura, or even whether pain, unusual in kind or degree, would be an attendant symptom at all? The operation for the removal of a portion of nerve affected with acute neuralgia has detected no morbid, or at least no inflammatory condition of the nerve.

Again, it is notorious that a paroxysm of neuralgic pain is frequently induced by the most gentle application of the hand, by a current of cold air, or the slightest effort of the affected part; yet it will not only bear forcible pressure, but is actually relieved by it. If the pain be referrible to the distension of the neurilema, and their pressure on the nerve by the dilated vessels, of course the external pressure predominating, ought to increase the pain.

In severe cases of neuralgic pain of the sciatic nerve, the same fact, I believe, generally holds—pressure on the nerve for the most part mitigating rather than aggravating the pain. I have myself submitted cases of sciatica to the severest treatment, by cupping, blistering, and embrocating, from none of which remedies have I ever obtained the smallest remission of pain. In one severe case thirty-six ounces of blood were taken at one time, by cupping over the track of the nerve. This was succeeded by a succession of blisters, liniments, and embrocations, without affording relief. Had the benefit been partial or temporary, a sceptical pathologist might have found material for an opinion favourable to inflammation; but the pain was literally unmitigated: and I speak with confidence on this head, for I was myself the subject of it.

Is there any difference, except in intensity, between the diseases known under the terms tic douloureux, neuralgia, and sciatica? They all affect sensitive nerves, the motor functions in the case of sciatica remaining unaffected; nor is this more remarkable than that the sensitive branches of the face can be paralysed, without the smallest influence being conveyed to the motor nerves of the same part. Neuralgia, either acute or chronic, is considered an excess of the natural function of the nerve, a "morbid sensibility;" and are not twitchings, chorea, or convulsions, a "morbid activity" of the spinal motor nerves in which sensibility is unaffected? Yet we do not treat these as inflammation of the nerves themselves, although they may possess a remote origin in altered structure. What are the most efficient remedies in neuralgia? Certainly not those which experience teaches us as most influential in the treatment of inflammation—ammonia, guaiacum, iron, colchicum, bark. A form of neuralgic pain which frequently attacks pregnant women, and occasionally referred to the presence of a carious tooth, I have repeatedly seen relieved in the course of a few hours by half-drachm doses of the muriate of ammonia, taken in solution. I cannot comprehend the nature of such influence on any theory of an inflammatory condition. Again: the treatment by depletion and counter-irritants, as far as I have seen, is invariably unsuccessful; nor do I believe that the digestive system exerts any beyond the most remote influence over the disease. To the above may be added, as unfavourable to the inflammatory condition, the fact of the periodical nature of the attacks in some individuals, with their pertinacious adherence to a few of the branches of the affected nerve; and this

is the more remarkable when we consider the propensity which the various forms of inflammation possess to extend along the textures primarily affected by them. Surely there is no resemblance between the influence possessed by the remedies employed in acute neuralgia and that exercised by bark, steel, and other tonics, in cases of chronic inflammation of the asthenic form, which, as it were, overwhelm the disease by the force and vigour they give to the circulation; for here the effect, though most imperfectly understood, is direct and almost immediate.

My friend and neighbour, Mr. Spry, a well-known member of our profession, has suffered from repeated attacks of acute neuralgia since the year 1827, which occupied the region of the lower jaw on the right side. The pain, which was occasionally intense, originated from the mental foramen of that side, and thence extended in various directions along the track of the mental nerve. When the attack was somewhat more than usually severe, the pain shot outwards towards the mastoid process, but never originated in that region. It was at any time excited by gentle friction of the hand, or by a current of cold air. Previous to the year 1835, he had employed most actively the remedies usually resorted to by professional men, with occasional, but only temporary, mitigation. During the early part of the year 1835, he consulted a medical gentleman of considerable experience in the treatment of similar affections, who recommended him that of counter-irritation. In consequence, he commenced the application of leeches, about a dozen at a time, which were repeated at intervals of two or three days. In this manner he applied, in succession, about six or seven dozen. This plan was prosecuted by the use of blisters, of which he applied many, and these were succeeded by an ointment composed of deuto-ioduret of mercury. The effect of these remedies, as regards the face, was great tenderness and excoriation, and a remitting pain was converted into an unremitting one; as regards the disease, it was undiminished. I saw him after this plan was relinquished, in a paroxysm of pain, and at my recommendation he took two scruple doses of the muriate of ammonia. The first dose relieved his pain in a very considerable degree; to use his own expression, "in a greater degree than any medicine he had ever taken." The second dose produced a trifling diminution, while the third was inoperative.

About the month of August in that year he was recommended to try the effect of the aconitine, five grains of which, obtained at Morson's, in Southampton-Row, were rubbed down into an ointment with five drachms of cerate. The first application subdued the pain in a partial degree. It was applied in a small quantity by the forefinger over the track of the painful nerve, and was gently rubbed, or rather smeared, over the surface, for half a minute or longer. These applications were made according to the degree of pain—either once or twice in the day. They were applied during six days only, when the pain ceased entirely: nor has he suffered from relapse to the present hour — a period of fourteen months. He describes the medicine as very powerful, producing a sense of numbness over the jaw, which continued for about twelve or eighteen hours, and during which the functions of the motor nerve were perfectly unaffected — so that the effects were rapid and conclusive. He can now face any wind or temperature with impunity. He informed me that in consequence of the manifest advantages which he had derived from the aconitine, he recommended its use to a lady who, like himself, had been a very severe sufferer from this disease,—that she made the same applications, and with the same result, although she has, I am informed, suffered a slight relapse, from which the same remedy once more relieved her.

Richard Hodge, aged 40, a fisherman, of dark swarthy complexion, and apparently of healthy constitution, was admitted into St. Bartholomew's Hospital on September 10.

During the last eight years he has been suffering from acute neuralgia of the right side of the face, for the relief of which three molar teeth had been at various times extracted. On the extraction of the first tooth, a portion of alveolary process was fractured, by which the pain, instead of being relieved, was greatly aggravated. His medical adviser ordered him to be cupped, embrocated, and blistered, from which he derived no benefit. Among a large variety of other medicines which he had taken were dark powders (probably carb. ferri), which produced but little

relief, and, indeed, the whole treatment was inefficient. A surgeon at Scarborough, whither I presume he resorted for his health, extracted two sound teeth, and applied leeches and electricity during four months without benefit. From Scarborough he visited Exeter, where a repetition of the same treatment was threatened, but not carried into execution. During the whole of this period he had had no longer cessation of pain than three or four days in succession; and though he continued to follow his occupation of a fisherman, he was frequently driven on shore by the severity of the pain, for the occasional relief of which he resorted to laudanum.

His present symptoms are, severe darting and sometimes fixed aching pain, after long continuance, on the right side of the lower jaw, extending as high as about the middle of the face, and including half the nose; pain under the tongue; flashing of light before the right eye when the paroxysms are intense, causing depraved vision. He is rarely free from pain for more than two or three days, and describes a constant gnawing sensation over the affected side of the face; pain exasperated by movement in eating, drinking, or speaking, or by the application of either extreme of temperature: it often wakes him from sleep. Temperature of each side of the face the same.

His constitution is apparently healthy, and he has not been addicted to drink.

On the 14th I ordered him the ointment employed in the former cases—

Aconitin. gr. v.; Cerat, 3vj.

Up to the 28th the ointment had been used most sedulously, without producing any perceptible effect either on the skin or upon the nerve.

On the 28th some aconitine, obtained from Morson, was used as above, the application of which was followed by the same benefit which attended its use in the former cases. When asked to describe the effect produced by the ointment, he said, "It appeared to search out the pain." He could not bear its use more than once a day, as his face swelled after its application. He likewise said it produced a numbness of his face for some time after. He applied the ointment about eight days, and from this period to the 11th of October he has had no recurrence of actual pain: on this day he left the hospital in good health and spirits, suffering only occasional twitchings, which he declares "are not worth mentioning." He used ten grains of the drug.

These two cases are not introduced to your notice with the intent to claim the merit of originality of treatment;—I obtained the hint from others, and have but verified their recommendation. The interest of the cases may be found in the fact that an acro-narcotic poison will cure a local pain, where every description of depletive and counter-irritant has failed. What reasonable practitioner, however fond of trying new methods, would dream of rubbing in aconite ointment over a local inflammation? — yet why not, if tic douloureux be an inflammatory disease; for it will undoubtedly cure that. It appears to me just as reasonable to attempt the cure of local phlegmonous inflammation by aconite ointment, as to hope to mitigate acute neuralgia by leeches and blisters. Pain may be a concomitant of inflammation, but singly can never constitute it. When an attendant symptom, it never greatly preponderates, but always holds a certain ratio to the rest. And does not the very fact of excessive pain lead the practitioner towards the opinion, should inflammation really exist, that there is something more—some nervous derangement, either physical or vital, giving an eccentric character to the case?

Probably sciatica differs but in intensity from tic douloureux: there is the same irregularity of pain, darting along a sensitive nerve, and excited by the same causes. It will in some instances pursue with great exactness the distribution of the posterior crural nerve, dividing above the ham, and following the two branches of posterior and anterior tibial to the foot. Neither do these cases yield to counter-irritants or depletives, although sciatica runs its ordinary career more rapidly than the acute form of the disease. Its cure may be referred to means which really possess no influence over it. Sciatica, except in old persons and in confirmed cases, generally, I believe, yields to the influence of time without treatment, or at least is greatly mitigated by it.

During the last autumn, while I was on duty at St. Bartholomew's Hospital, I happened to have three cases of sciatica in the hospital at one time: one

case was complicated with other disease; in the other two, antiphlogistic treatment, as it is termed, had been freely but inefficiently applied by their respective medical attendants,—in one during six weeks, and in the other during three. Both recovered with comparative rapidity under the use of colchicum given in large doses, with guaiacum and opium.

The aconite, if a very expensive medicine, is at least a very powerful one. The drug first employed in the case of Richard Hodge was, I presume, obtained from a French house in London, by which it is imported from M. Pelletier in Paris. However, *it was perfectly useless;* while that which was obtained from Morson was as strikingly efficient.—I am, sir,

Your obedient servant,

F. C. Skey.

Charter-house Square,
Oct. 26, 1836.

CASE OF POPLITEAL ANEURISM.

RAPID AND PERFECT CURE.

To the Editor of the Medical Gazette.

Sir,

Some apology probably may be thought necessary for troubling your readers with an account of a case of popliteal aneurism; but I send the following as an instance of the shortness of time in which the circulation in the limb, and through an aneurismal tumor, may recur, after ligature of the femoral artery, in a subject, moreover, whose arterial system generally was in a morbid condition, and yet without impeding the perfect cure of the aneurism.

The number and size of the anastomosing vessels in the head and neck render the phenomenon of quickly-restored circulation less remarkable in cases where the carotid has been tied, of which fact numerous instances are on record; as one of which I may cite a case of orbital aneurism, of which a short report was given by me, and published in your journal for February 27th, where full pulsation returned in the tumor four hours after the operation, but yet without interruption to the entire removal of the aneurismal disease. The cause, however, of the quick restoration of circulation in the present case is not so obvious, as the disease can hardly be supposed to have existed long enough, or to have attained sufficient size so far to interrupt the course of the blood through the main channel, as to give rise to much enlargement of the collateral vessels; and, on the other hand, the event proves there was no unusual division of the femoral artery, as occurred in a case operated on by Sir Charles Bell; and in one, a preparation of which is in the museum, I believe, of St. Bartholomew's Hospital: and these circumstances, of long-continued pressure from a large tumor, and unusual distribution of vessels, are the only causes commonly assigned as accounting for a rapid restoration of the circulation, as indicated by pulsation in the tumor, and continuation of the vessel below it.

Both the case above alluded to and the one I have now forwarded, show also the marked and the immediate good effects of blood-letting on the occasion of any considerable increase in the pulsation of an aneurism after ligature of the artery supplying it.

At the conclusion of the relation of the case of orbital aneurism, I stated that I should report any further change that might occur in the subject of it while under my charge. When he left the hospital his eye had quite returned into the orbit, and no vestige of the tumor remained, but with the paralysis of the left side of the face, including the eye-lids, unaltered; his vision, however, as far as the optic nerve was concerned, unimpaired.

In alluding to this case, I take the opportunity of recalling attention to two cases of aneurismal orbital tumors which were, I imagine, of a very similar nature to the one related by me, reported, the one by Mr. Travers, in the second volume of the Medico-Chirurgical Transactions, and the other by Mr. Dalrymple, in the sixth volume of the same publication. These two cases are given as, and I believe generally considered as, instances of Mr. John Bell's aneurism by anastomosis. The propriety, however, of this diagnosis may probably admit of question; but it would entail too long a disquisition to enter on the question here. I am not aware of other cases of similar nature being on record, nor, consequently, of any post-mortem examina-

tion which might throw positive light on the subject.

I have the honour to be, sir,
Your obedient servant,
JOHN BUSK.

Seamen's Hospital, Dreadnought,
Oct. 23, 1836.

P. R. Welshman, aged 37, admitted July 22d, 1836; short and muscular in appearance, but pale. He has a large pulsating tumor in the left ham, which protrudes also slightly on the inner side of the thigh, in front of the inner hamstring; painful on pressure, not discoloured, and compressible. A loud very distinct aneurismal whiz is heard on applying the stethoscope; pulsation in the tumor ceases on compressing the artery in the groin. It is stated to have commenced about five weeks ago, and no cause for it can be assigned, nor can he remember any sudden snap or attack of pain. The considerable size of the tumor prevents extension of the limb. Its greatest length is about five inches, and breadth about four. He states that he has long been subject to dyspnœa on exertion, and to sudden attacks of pain in the region of the heart. The heart's impulse is powerful, and can be felt over an extended surface; and with the stethoscope a strong bellows sound can be heard accompanying its action: this sound is loudest under the middle of the sternum, and on the left side, between the cartilages of the third and fourth ribs. The course of the abdominal aorta can readily be traced by the eye when he lies on his back, but is unaccompanied with any sound. The femoral arteries on both sides can also be seen to pulsate to their passage through the adductors, and they seem to the touch to be of larger calibre than usual. The continuation of the right anterior tibial on the dorsum of the foot can also be readily seen, but is not so distinct on the left. All the arteries which can be felt pulsate powerfully, and appear of large size, and the pulsation in most of them is accompanied with a peculiar sort of thrill.

In the evening he was seized with acute pain in the cardiac region, for which a sinapism was applied.

July 23d.—Free from pain.

V.S. to xx. oz.

24th.—Blood buffed and cupped. He feels lighter; tumor unaltered, and very painful when touched. I then proceeded to secure the femoral artery in the upper third of the thigh, with a single fine ligature. The vessel was of larger size than I ever observed it before: the passage of the needle caused so much pain, that I examined the part with great care for any nerve which might be in danger of being included, but could observe none. On the knot being tightened, he felt very acute pain extending down the whole limb, and which lasted several minutes. The wound was united with numerous fine sutures. The pulsation of the tumor immediately ceased, but its size was not immediately much altered. No other change took place in the limb, and assiduous friction was kept up for several hours.

25th.—Has passed a tolerable night, with occasional pain, from which he is now quite free. The tumor, which is greatly diminished, is still very tender; limb's appearance and temperature natural; pulse 96, hard; tongue white.

℞ Tinct. Digitalis ♏ v.; Magnes. Sulph. 3j.; every 6 hours.

26th.—Has had some pain extending down the leg during the night, and complains of a constant numb, yet painful sensation, in the upper two-thirds of the tibia. The wound is entirely united, excepting the exit of the ligature, and without least inflammatory blush. Pulse 84; skin cool.

Pergat, and an opiate, at night.

27th.—Very little pain, but does not sleep. Pulsation is distinct in the tumor, and in the dorsal artery of the foot. Pulse 90, firm.

V. S. to x. oz. Pergat.

28th.—Pain lessened; pulsation not at all increased; pulse 86, soft. A copious deposit of lithic acid sand in his urine; blood buffed and cupped.

29th.—Pulsation in the tumor not increased, but he has considerable pain and tenderness in it; pulse 86, much softer than it has been. The force of the circulation generally appears to be diminished.

30th.—Tumor not so tender; pulse 84, soft; tongue clean. He does not sleep, notwithstanding a strong opiate, and has startling dreams. In the evening, the pulsation of the tumor having become more evident, pounded ice in a bladder was applied to it, and 12 oz. of

blood taken from the arm; and at night he took a grain of muriate of morphia.

31st.—Has passed a good night, and is free from pain. Blood taken last night buffed and cupped, with a small coagulum. Pulsation very indistinct in the tumor, and hardly to be distinguished in the foot. No pain or tenderness in the tumor. His urine still deposits a copious lithic sand.

℞ Magnes. Sulph. ʒi. Calcinat. ʒss. T. Digitalis ♏ vij., 6tis horis.

August 1st.—Pulsation and size of tumor very much diminished, and he complains of very acute pain in the extremity of the left thumb, which is a little swelled.

Hirudines xij. Poultice.

2d.—No clear pulsation to be detected in the tumor; thumb and middle finger very painful — apparently from some gouty affection.

Hirudines xxx., which in the evening had not afforded much relief.

Adde Vin. Sem. Colch. ʒss. Sing. haustibus.

4th. — Hand easier; leg free from pain.

5th.—Hand well; no pulsation in the tumor, and very indistinct in the foot; urine loaded with lithic acid.

6th. — Has rheumatic pain in the knee, which prevents sleep.

Pergat.

7th.—Rather more pulsation in the tumor; the passage of the gravel causes much pain in the urethra.

V.S. ad ʒxij.

8th.—Blood buffed and cupped; knee less painful; sand very copious.

Adde Liquoris Potassæ, ʒss. haustui. Omitt. Magnes. Sulphas.

9th.—Pulsation can be felt only on the inner side of the tumor; urine with less gravel, and smells strongly.

11th.—Free from pain. The ligature remaining firm, was tied round a piece of bougie, in order to keep up extension, and on the next morning was found detached.

15th.—Has occasionally darting pain about the wound, where there is some hardness; it has been long healed, excepting at the exit of the ligature. The popliteal tumor has been stationary the last few days, and still obscurely pulsates; it is free from pain, but prevents full extension of the limb. A bandage was applied from the toes upwards, with a compress over the tumor, but the pressure could not be long borne.

22d.—Has no complaint but of slight pains in the knee; tumor much the same, and still pulsating; the bandage and compress have been applied whenever they could be borne.

23d.—Has great pain about the heart, and more than he had in the knee. The heart's action is violent, and the bellows sound loud in the situation of the left ventricle.

V.S. ad ʒxij. C. C. regioni cordis. Hirudines xij. genu.

In the evening the pain about the heart was much relieved; knee much the same. Blood buffed, and slightly cupped.

Vin. Colchici, ʒj.; Muriat. Morphiæ, gr. j. h. s.

24th.—The pain in the knee continues, but he has none about the heart.

℞ Ext. Colchici Acetat. gr. ss.; Ext. Hyosciam. gr. iij.; Morphiæ Muriatis, gr. ¼. Ter die.

Sept. 4th. — The tumor very small, and quite free from pain or pulsation. He still feels, occasionally, pain in the inner side of the knee and tibia, where there is also some degree of numbness. A small fistulous opening still remains in the wound.

10th.—A few drachms of pus escaped suddenly through the small opening in the wound, since the discharge of which all pain has left him, and on the

12th—He was discharged quite well, having perfect power of flexion and extension. The femoral artery can be felt pulsating to within an inch and a half of the spot at which the ligature was applied, and pulsation is very distinct on the dorsum of the foot. Scarcely any remains of the tumor are to be found, more than a little fulness in the ham, and slight induration; no pulsation whatever. He feels well in all respects, but the bellows sound still accompanies his heart's action.

I had prepared to send this account for insertion in your journal some time ago; but as the man, about the time I had it ready, returned to the hospital labouring under an attack of acute rheu-

matism in the arms, and also affected with severe rheumatic pericarditis, I delayed the sending of the history of the case until he should have recovered from the attack, which at one time appeared doubtful. He is still labouring under considerable affection of the heart, and rheumatic pains in the hands and arms; his leg remains well.

A NEW METHOD OF PREPARING IODIC ACID.

To the Editor of the Medical Gazette.

Sir,

I send for insertion in your valuable periodical a new method of obtaining iodic acid; it will be found to be cheaper and safer than the mode used by Sir Humphry Davy, and afford a purer acid than the plan proposed by Gay Lussac. I say purer, since, from some late experiments, which I intend to repeat, I am led to conclude with Sir H. Davy, that the acid of Gay Lussac is sulpho-iodic acid.

Put one atom, or 124 grains, of iodine into a bottle containing 24 ounces of water, and pass chlorine, previously washed, through the mixture, until this having undergone various changes of colour, from orange-red to yellow, shall have become as colourless and transparent as water. The solution is then to be carefully heated to 212° Fahr. to expel the excess of chlorine, and five atoms, or 690 grains, of pure oxide of silver being added, the mixture is to be boiled for ten minutes, filtered, and cautiously evaporated to dryness. The product is pure iodic acid, and must be kept in a well-stoppered phial.

Since the liquid obtained in the first part of the preceding process not only possesses the taste and smell of muriatic acid, but will also afford that acid by distillation, it is but reasonable to conclude that the liquid itself is a mixture of muriatic and iodic acids with water, and consequently that the chloriodic acid of Sir Humphry Davy is merely chloride of iodine, with a variable quantity of iodine in excess. I have not, however, been able to combine chlorine and iodine directly in the proportions necessary to produce these acids (muriatic and iodic) on being dissolved in water, but I have no doubt that this may be done in a sufficiently reduced temperature. In the most considerable experiment which I made on this subject, 50 grains of iodine absorbed 41·5 cubic inches, or about 31 grains of chlorine. The orange-coloured product thus obtained, on being dissolved in water and exposed to the light for a few days, deposited nearly 8 grains of iodine, and became of a pale yellow colour; in which state it still remains, and gives, with nitrate of silver, a white precipitate, soluble in ammonia.

As the iodate of ammonia is not described in any work on chemistry with which I am acquainted, I think it right to state here that it is a highly crystalline granular powder, and possesses but little solubility.

The iodic acid is open to so many objections as a test for the presence of morphia, that no reliance ought to be placed on it, since it affords a precipitate not in any way to be distinguished from that by morphia with the following substances — viz. sulphocyanic acid; the sulphocyanates of potash and soda; saliva, doubtless from the presence of the above; urine, perhaps from the same cause; albumen; arsenite of potash; tartarized antimony; and the proto-salts of iron, tin, and manganese. The importance of these facts, in a medico-legal point of view, is considerable.

The solution of muriatic and iodic acids will answer equally well as iodic acid alone, for the purpose of testing morphia.—I am, sir,

Your obedient servant,

Lewis Thompson,
Member of the Royal College of Surgeons.

Roe-Buck Place,
Great Dover Road, Nov. 2, 1836.

EFFECTS AND USES OF SMOKING.

To the Editor of the Medical Gazette.

Sir,

If you think the following observations upon the effects of smoking worth publication, their insertion in your journal will oblige, sir,

Your obedient servant,

Frederic Roberts,
M.R.C.S.

Galt-y-Beren, Carnarvonshire,
October 23, 1836.

The properties of the tobacco plant are well known to be those of acting upon the heart, producing an irregularity in its action, which is at first increased, and afterwards becomes diminished, or altogether suspended, whereby the circulation is stopped, and syncope produced. Nausea, vomiting, vertigo, tremors, dilated pupil, cold perspirations, a very feeble pulse, with great anxiety and dejection, are the symptoms of an over-dose of the *infusion*, which Sir B. Brodie has proved to differ in its action from the *distilled oil*, by reason of the latter containing no *nicotin;* and "whether applied to the tongue or injected into the intestines, does not stop the action of the heart and induce syncope, like the infusion of tobacco, but that it occasions death by destroying the functions of the brain, without directly acting on the circulation. In other words, its effects are similar to those of alcohol, the juice of aconite, and the essential oil of almonds." Upon these principles, it is exhibited as an antispasmodic and diuretic in dropsy and dysuria. Its good effects in asthma, colic, ileus, and strangulated hernia, prove its antispasmodic properties in an eminent degree. It has a powerfully sedative influence upon the nervous system, as is familiarly exemplified by its relieving appetite when chewed. Upon the same principles also, I shall endeavour to show the effects of *smoking*, which greatly vary in different constitutions.

Smoking, when moderately indulged in, relieves tension and constrictions, by gently relaxing muscular fibre; and by its action on the heart it moderates the circulation, and determines to the centre, thereby rendering the circulation in the capillaries less active; which, I suppose, was the reason that led to its employment lately on the continent in scarlatina. A very frequent effect of smoking is to excite the action of the intestines; indeed, "suppositories of the leaf are used in India, to provoke the action of the bowels in children." Its operation in this manner is effected *by increasing the secretion of the mucous membrane of the intestines, as the exhalation by the skin is diminished.* The constriction of the skin, from disorder of its function, is succeeded by a relaxation, if the smoking is continued or indulged in, by one of a relaxed habit, or of an irritable stomach. However obnoxious and worthless this plant may be considered, there is no doubt that the Creator intended it, like every thing else, for some purpose, and has in like manner placed it where it would be most required.

Upon the principles, then, on which we have shewn this plant to operate, it must be considered as a natural provision for man against the evils which the nature of his climate subjects him to: whereupon we find tobacco growing in a country where man, from excessive heat, becomes exhausted by profuse perspiration, from which this leaf so agreeably relieves him. The evil of a slight determination to the centre, which might occur, would be counterbalanced by the good effects of checking the profuse sweating, and the action on the bowels. The custom of smoking by Europeans in hot climates must, in this manner, be frequently beneficial; as in moderating the perspiration, the excessive secretion of bile, from the sympathy which exists between the liver and skin*, is obviated, thus preventing fevers (especially bilious) and other diseases in which the liver is implicated. It must also diminish the liability to those cutaneous diseases which occur in hot climates, from excessive action in the vessels of the skin.

Its ill effects, especially in a cold moist country like our own, are evidently frequent and numerous; it checks the perspiration, produces nervousness, a flabby constitution, congestion in the larger viscera, and its consequences; predisposes to cutaneous diseases, which arise from want of action in the skin; and aggravates those already existing, besides others, in which the functions of the skin are imperfect, particularly chronic inflammatory dyspepsia, which is accompanied by a dry skin. It impairs digestion, by expending the saliva, the increased secretion of which, discharged by spitting, diminishes the cuticular exhalation — a circumstance which may give rise to a fœtor of the breath, by morbidly increasing the exhalation by the lungs.

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* In immoderate exhalation by the skin, the secretion from the liver differs from that of other organs, by being *increased*, and not *diminished*. —JOHNSON ON TROPICAL DISEASES.

HOMŒOPATHIC IMBECILITY.

DISEASES OF THE METROPOLIS.

To the Editor of the Medical Gazette.

Sir,

The almost total absence of inflammatory disease from the metropolis, during the last five or six years, has enabled the converts to homœopathy to revel in its mysteries with perfect impunity. Had these individuals been men of no standing in the profession, they might have been allowed to use their atoms without interference; but when we find gentlemen of professional attainments, and of literary acquirements too*, advocating this empirical study, it is high time the public should be informed, through their professional friends, of the false security of such treatment, and to pause before they confide in the forty-eighth part of a grain of blue pill, or the twelfth part of a grain of camomile flowers, removing an attack of inflammation. To show how completely free the metropolis has been from all active disease during the last year, I would mention, that in the two large public establishments (not hospitals) of which I have the care, there have been admitted 14,000 persons. I have only had occasion to use the lancet three times: twice in cases of phrenitis from excessive drinking, and once in a case of fractured skull; the deaths in the 14,000 amounting, in the year, to twenty-six; which, taking into consideration the dissolute and abandoned characters of the majority, is unusually small.

I hope, sir, you will consider it your duty to assist in dispelling the delusion under which the public are suffering, and that the profession will not cease to heap ridicule upon the homœopathist, till he exclaims in despair, "*Non tali auxilio —miseris succurrere disco.*"—I am, sir,

Your obedient servant,

Henry Wakefield.

Lansdowne Place, Nov. 2, 1836.

* Our correspondent means to be complimentary.—Ed. Gaz.

TENANCY BY THE COURTESY.

To the Editor of the Medical Gazette.

Sir,

I have with pleasure witnessed the interest which you take in every subject relating to medical jurisprudence, and I am sure, therefore, you will not deny me the opportunity of obtaining, through the medium of your excellent journal, an answer to the following question:—

Is *tenancy by the courtesy* still a part of the law of this country?

In a respectable Quarterly Review, it is stated that the law of "*tenant by the courtesy* has been recently *annulled**." It is possible that the reviewer may be right; but it would have been more satisfactory had he, instead of contenting himself with a bare assertion, given the authority upon which he rested it. I am induced to think he is wrong, for the following reasons:

1. Mr. Chitty, in his work, published in 1834, speaks of it as then in existence †.

2. No mention is made of any alteration in the law in the statutes of 1834 and 1835.

Not having yet seen the statutes for 1836, the act annulling it, if it be annulled, as the reviewer states, may be among them.

One of your correspondents, in a letter addressed to you in August, 1833‡, remarks, that "the law with regard to tenancy by courtesy has been completely changed, in consequence of the first report of the Law Commissioners on real property; so that it will no longer be necessary to prove that a child has lived for *a second or two* in order that the father should enjoy the tenancy by courtesy." He also speaks of Acts (Bills?) being brought into parliament by the then Solicitor General (Sir J. Campbell) on the subject; but whether the Bills were brought in or not, there is no evidence of their having passed, as your correspondent intimates. It is, indeed, hardly likely, that, had such an alteration been made, Mr. Chitty would have failed to notice it in a work published the year following your correspondent's communication. So far from this, Mr. Chitty refers to the old law as still in existence; and the statutes of 1834 and 1835 contain, as far as I can perceive, no enactments to the contrary.

The question is of material importance in regard to the survivorship of

* British and Foreign Medical Review, Oct. 1836, p. 408.

† Chitty's Medical Jurisprudence, p. 435.

‡ Medical Gazette, vol. xii. p. 677.

children, either *during* or immediately *following* birth. Perhaps either yourself or some of your numerous correspondents will be able to remove the doubt which seems to me to hang over the subject.—I am, sir,

Your obedient servant,

M. J.

London, Oct. 24, 1836.

[We can give our correspondent a categorical answer: there has been *no* alteration of the law of tenancy by the courtesy. Neither the statute 3 and 4 Will. IV. c. 106, affecting inheritances, nor the preceding chapter, 105, amending the law of dower, disturb in any way the courtesy as previously established; and the bill which was prepared in 1833, to amend the law of tenancy by the courtesy, was never carried.—Ed. Gaz.]

MUSCLES OF THE EYE-BALL AND THEIR NERVES.

To the Editor of the Medical Gazette.

Sir,

Mr. Walker's statement and mine are now before the readers of the Gazette; I do not, therefore, feel it at all incumbent upon me to enter into any further explanation of the subject until the publication of my paper in the next volume of the Transactions of the Provincial Medical and Surgical Association. I trust the perusal of that paper will render any such further discussion as could be founded on the views given by Mr. Walker in his letter of Sept. 20th, totally unnecessary. I shall for the present be contented with briefly mentioning the discoveries to which I have presumed to lay claim. These are different explanations of the functions of the third, fourth, and sixth pairs of nerves from any previously given, founded on a careful examination of the muscles which these nerves supply in reference to their separate and combined action.

I would ask, then, if this statement be correct, am I not right in requiring more acknowledgment from one who has made use of these views than is contained in Mr. Walker's remark, nearly at the end of his letter—that "Mr. Hunt first suggested the *probability* that the complexity of the nerves of the orbit was connected with the varied motions of the two eyes which I have pointed out"?—I am, sir,

Yours respectfully,

R. T. Hunt.

Manchester,
October 22, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'Alembert.

Icones Plantarum; or Figures, with brief descriptive Characters and Remarks, of New or Rare Plants, selected from the Author's Herbarium. By Sir W. J. Hooker. 8vo. Part I. London, 1836.

Few persons, during the last quarter of a century, have laboured more assiduously, with pen and pencil, in the cause of botany, than Sir W. J. Hooker; none more successfully. The state, by bestowing its honours upon him, has borne testimony to the extent and value of his exertions, and the esteem in which they are held by all scientific persons is a farther confirmation of their worth. Eager, apparently, to justify yet further his claim to such general homage, he now comes forward with a new work, which, if not so elegant and ornamental as some of its predecessors, is calculated to be equally useful. Indeed, we regard the idea of this work as a singularly happy one. "It has often occurred to the author of the work now announced, that by means of lithographic drawings, executed on moderately-sized paper, an important series of plates of new and little-known plants might be offered to the scientific world, at a price so moderate as to bring them within the reach of almost every one interested in the subject." Nor is it the zeal alone of the author that we are called upon to notice with commendation, but likewise the liberality of the publishers. "Even should the publication meet with the success that his fondest wishes might anticipate, yet the price set upon it is so low as to forbid any hope of profit; and he is anxious to express his acknowledgments to the publishers, for kindly guaranteeing him against any pecuniary risk in the undertaking." In con-

sequence of this, we have here 58 well-executed lithographic representations of a considerable number, nearly 100, rare plants, for the plates devoted to the mosses contain sometimes six species, at a price incredibly low. Yet a prudent caution, rising out of sad experience of the slender encouragement given to illustrated scientific works in this country, has occasioned the impression to be limited to 300 copies. We trust, however, that the increasing zeal for natural history, diffusing itself over the country under the influence of the British, and many local Associations, will lead to such extended patronage of this work, as will justify ere long a second edition. Meanwhile, those who feel desirous of possessing these beautiful representations of plants, of very diversified form and structure, from trees down to Ferns and Mosses, will do well to make application while they are yet to be had. By the plan adopted in the letter-press, when the work shall have been completed, the plates, and the descriptions of them, may be arranged and bound up in whatever way the possessor may prefer. This is a great advantage, but we trust the series may be so extended that some hundreds of plates shall be published before any one is required to decide how he would wish them arranged.

On Disease of the Hip Joint, with plain and coloured Plates. By Wm. Coulson, Consulting Surgeon to the London Lying-in Hospital, late Surgeon to the General Dispensary, &c.

Mr. Coulson has devoted considerable attention to the diseases of the hip joint, and two clinical lectures on the subject, which he delivered about five years ago, will be found in one of our early volumes. Since that time, we learn from the preface, that his opportunities of investigation have been increased by his appointment to the Board of the Sea-Bathing Infirmary — the result of all which is the monograph before us.

The anatomy and physiology of the hip joint are fully described in the opening chapter; but of this, the only portion to which we shall allude, is the account of some experiments of Weber's, in reference to the means by which the head of the femur is retained in the acetabulum, and which would seem to shew that atmospheric pressure has a considerable influence. The German authority says, that a body was placed in such position as to suffer the thigh to hang freely over the table; the muscles and ligaments were then cut through, and yet the thigh did not fall; on the contrary, the articular surfaces remained in close apposition. A small hole was made in the acetabulum, so as to allow the air to enter, and straightway the limb dropt as far as the capsules would suffer it, and this, although the muscles and ligaments were not divided. The head of the bone was then re-adjusted in the socket, and the aperture in the acetabulum stopped with the finger; the bone was now retained *in situ*, but once more fell out on the finger being removed. These experiments have been repeated by Mr. Coulson, and with similar results "as regards the most essential point." He adds, that the extent to which the head of the bone can be removed from the acetabulum by the admission of air, the effusion of fluid, or by force, somewhat exceeds an inch. By the latter, it is difficult or impossible to effect so great a lengthening, unless the limb be rotated inwards at the time.

Disease of the hip joint is regarded by Mr. Coulson as the mere external demonstration of a pathological condition, involving the general system, and consequently any views limited to the part itself are too confined. The vital or nutritive functions are those which he believes to be primarily affected; while the secretions are remarkably implicated in almost every instance. This view leads him to distrust the efficacy of topical remedies so generally used, which, indeed, he speaks of as having produced an exacerbation in almost every case in which they have been employed.

Where the secreting organs are large, and the locomotive proportionally small, then it is that, according to some authors, disease of the joints, especially the hip, are most readily developed; and he instances the Saxon population of England and Holland in illustration, having large trunks and feeble extremities. Camper states that in his time as many as one in twenty-eight of the Hollanders became lame. This principle is adopted by Mr. Coulson, and worked out by numerous, and some of them ingenious, remarks, the sum of the

argument being, that the affection of the joint is "not a consequence, but a mere external symptom, of constitutional disease."

It is proper to add, that while treating of the pathology, Mr. Coulson brings successively before the reader the opinions of all the best authorities, both at home and abroad.

The morbid anatomy of the hip-joint is interesting, and a very good account is given of it. The changed appearances vary more in degree than in kind, marking the extent of the mischief rather than difference in its nature. The chief changes are inflammation of the synovial membrane, its thickening, ulceration, and perforation; preternatural secretions into it of synovia, lymph, or pus; its entire destruction. The ligamentum teres becoming ulcerated or absorbed. The articular cartilages abraded, ulcerated, or entirely removed. Destruction of the cartilages being replaced by an ivory deposit; portions of them being found loose and floating. Widening and shallowing of the socket; the bone becoming denuded and carious, or ulcerated. Lessening of the head of the femur, and contraction of its neck; softening of the bone, and deposition in its cancelli of yellow caseous matter, or of transparent fluid. The most striking feature in this form of disease is the absence of the secretion or deposition of bone; being, in this respect, very different from common inflammation, in which (especially when chronic) the ossified deposit is increased.

A clear account is given of the symptoms of hip-joint disease, but it does not contain such novelty as to warrant our dwelling upon it.

In the treatment, it is held by Mr. Coulson to be of great importance to distinguish between those cases which occur in strong and those in scrofulous patients; an observation in keeping with what has been made by other writers on the subject.

The subjects are illustrated by six well-executed lithographic engravings.

Physiologie des Menschen [*Human Physiology.*] Von Friedrich Tiedemann, Lehrer der Anatomie und Physiologie an der Univ. zu Heidelberg. Dritter Band. Darmstadt, 1836. Schloss.

The excellence of the two former volumes stamped a character on this work, and created a strong desire for its continuation. The third volume has just issued from the press, and will, we think, be found as replete with interest as its predecessors. It treats exclusively of the function of digestion and of aliment, giving an account of all that has been ascertained on the subject, both through the experiments of the author, and of his contemporaries.

MEDICAL GAZETTE.

Saturday, November 5, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE POOR LAW COMMISSIONERS' TREATMENT OF A MEDICAL OFFICER.

Our remarks on the Harpenden affair—an affair to the last degree damnatory of the *amended* poor-law system — were founded on a document issued from Somerset House. On their own shewing we proved that nothing could be more vile than the conduct of the Commissioners, in attempting to throw the heavy blame attaching to their proceedings in that case off their own shoulders on those of their medical officer. They made him, or endeavoured to make him, their scape-goat, fastening the iniquities of their system on his back, and then turning him adrift. But we find we were only half-informed when we made those observations: our information was *ex parte*, being altogether derived from the *honourable* Commissioners' statements. We were not aware to what an extent official papers may be made to lie, when it serves the purpose of the party in office to give them a certain colouring.

A letter from Mr. Kingston, of St. Alban's, has since appeared in the newspapers, throwing quite a new light on some of the circumstances connected with the affair. This gentleman, it will perhaps be recollected, was the medical officer so unceremoniously dealt with by

the Somerset House authorities; and certainly his version of the story, which appears to have all the impress of truth upon it, forms a remarkable comment on the statement of the commissioners. We freely confess that we were premature in our censures of some part of Mr. Kingston's conduct; but we were betrayed into severity by adopting too unhesitatingly the official report, never once thinking that it could be so grossly unworthy of credit. The lesson may be useful: we shall know in future how to appreciate productions coming from the same quarter.

The letter, in the first place, confirms all the chief facts relative to the Commissioners' trickery; and a more insidious, disgraceful trick, never was attempted to be practised upon the public. The main circumstances of the case cannot be too fully exposed. The public indignation was gathering into a storm: in addition to the manifold instances of heartless cruelty exercised towards the poor under the "amended" system, the case of a wretched woman absolutely left destitute of all medical assistance, and whose death was clearly owing to the mischiefs of the new law, was about to lead to a crisis, when the conscientious functionaries resolved to allay the ferment, at whatever risk. They could hit on nothing better than to sacrifice one of their officials. After due parade and preparation, they proceed. They throw their unfortunate hireling overboard—a sort of tub to the whale: but the whale is not so easily deceived; and the tub itself turns up eventually to their utter discomfiture and confusion.

Mr. Kingston has well exposed the whole train of machinations employed by the wily utilitarians. They took every advantage of him. He was entrapped into a conference at Somerset House with the secretary of the Commissioners, and while he thought he was offering an explanation simply of his conduct, every word that dropt from his lips was taken down by a short-hand writer, and given to the public as his *defence*. This, as Mr. K. very properly says, is what would not be done with the greatest criminal in England: if Mr. K. were regularly on his trial, he would be apprised that his confessions or statements were to be preserved, and he would be warned to be cautious to say nothing that might tend to criminate himself. But no: neither was any such warning given, nor were his depositions read to him, nor was he allowed to read them over, so as to guarantee their correctness: the first notification of the proceeding was, seeing his private conference with the secretary in Somerset House committed to the world through the newspapers! There might still be some excuse, if the thing were correctly done: but Mr. Kingston has pointed out some egregious misrepresentations: things were put into his mouth which he never uttered. Such at least was the haste of the zealous secretary to make a case for the public.

Among other points, they represent Mr. Kingston as saying, that he would conceive himself justified in attending more promptly to the call of the Squire, or any rich patient, than to the order of an overseer. Mr. K.'s obvious meaning was that he would consider the Squire's the more pressing case of the two, unless the order were duly backed by a request to be prompt, the case being really serious; for the Squire would not send unless there were some actual urgency, whereas the pauper's order has been often found vexatiously deceptive; the patient being probably at work, and no way ill, when the medical man, in obedience to the order, has arrived.

Again: Mr. Kingston is misstated as describing himself *thirty* years connected with parish practice; *thirteen* years were his words. Can there be a more convincing proof of the eagerness of the

party to make out a case? In their haste to come before the public with something in the form of an excuse, they have not the common decency to see that their officer is correctly reported.

But if Mr. Kingston were taken by surprise, not so was Mr. Secretary Chadwick: all the interrogatories were duly arranged for the occasion; the matter as well as the tone and temper. The object is manifest to all who read the published account of the conference. It was attempted to wring from Mr. Kingston an admission that parish medical duties were more strictly enforced under the new system than the old; and it was conceived that such an admission, coming from an officer of *thirty* years' experience, would be much stronger than coming from one of only *thirteen*.

The letter of Mr. Kingston, however, is clear upon the point of relative merits: he speaks positively on the subject, and, from his experience of both states of things, he is perfectly competent to give an opinion. All the strictness and severity of the present system he admits; but he distinctly denies its superiority. The poor were better attended to under the old system; there were more medical officers, and greater liberality in granting orders for relief. Under the new *regime* the amount of medical aid is greatly limited: the hands are fewer, and much worse paid, while the duties imposed on those few and ill-paid officers are beyond the powers of men of ordinary *physique*. The consequence is, that when an order is granted, as it generally is, with a most niggard disregard of the pressing wants of the unhappy paupers, there are many chances against its being effective; the means being utterly inadequate to the end proposed.

But on this head we beg to refer our readers to the excellent letter of an "Old Navy Surgeon," at page 204.

MADAME MALIBRAN.

Mystery still hangs over the decease of this ill-fated child of genius. It was asked in the *Times* a few days ago, whether M. de Beriot had not abruptly left Manchester with all her apparel and property ere she had ceased to breathe; and to those interrogatories we take leave to add a few others which relate to the medical proceedings.

Is it true, or rather is it not true, that when Dr. Bardsley was so unceremoniously discharged, his patient was going on favourably,—in fact, that she was then nearly or altogether convalescent?

Is it true that it was afterwards thought desirable by some *coup de pratique* to enable her to complete her engagement?

Is it true that manual interference was had recourse to for the purpose of effecting premature delivery, and that this failed to produce any other effect than that of overwhelming exhaustion?

And, Is it true that when the body of the unfortunate deceased was receiving the last offices from the strangers to whom she was left, the relaxing hand of death completed what art had been unable to accomplish?

These are questions of interest to science, to which we trust either M. Belluomini or Mr. Lewis will reply. They will perceive that a great practical lesson is involved, and although they have doubtless fully learnt it, the medical world is still kept in suspense.

OPERATION AT THE NORTH LONDON HOSPITAL,

IN PRESENCE OF THE PATRON.

On the 21st ult.-Mr. Liston performed one of those operations on the face, for his boldness and dexterity in accomplishing which, that gentleman has become remarkable.

The patient was a female, named Mary Griffiths, aged 20. The tumor,

which was of fibrous character, originally appeared seven or eight years ago upon the upper gum, above one of the incisors, and progressively increased, notwithstanding various efforts made to extirpate it at different times. On her admission into the North London Hospital the tumor and ulcerated surface occupied the site of the upper lip, nose, and great part of both cheeks, particularly the left. The whole was dissected out, and large portions of the upper maxillary and cheek bones were also removed, apparently with great ease, by means of the bone nippers. Astonishingly little disfiguration of the face remained after the flaps had been brought together; and the patient has since continued to do well.

A considerable sensation (to use the language of the newspapers) was caused by another production, of still more anomalous character, and which likewise was brought into the operation-room for the inspection of the pupils. On closer examination this proved to be neither more nor less than the person of Thomas Wakley, Esq. M.P. Patron and Puffer of the establishment, and Slanderer-General of all the other schools in the metropolis, who had kindly consented to appear on this occasion *in propria personâ*, in order to oblige the Professors, and to prove to the world that there is one hospital in London into which he is admitted!

We understand that it is in contemplation to perpetuate the event, by erecting in the theatre a bust of the *honourable* Patron. The inscription has not yet been finally decided upon; but the learned printer to the "University" has suggested, as being at once neat and appropriate, his own motto—

"ALERE FLAMMAM."

A WELCH MEDICAL SOLON.

"LATE INFANTICIDE AT THE BISHOP OF WORCESTER'S PALACE.—Mr. C. Llewellyn, surgeon, of Llanymyneich, says, in reference to the woman accused of this crime—'I am sorry to observe that Charlotte Grounsel, an inmate of the Bishop's palace, has, in my humble opinion, been a sufferer from the statement of her case before the Coroner's jury. I do not pretend to account how, or in which way, the wound on the child's neck was inflicted; but looking at it correctly, and in an anatomical sense, it could not have caused the child's death; neither do I think that the mere floating of the lungs in water is a proof of its having been born alive; therefore, in my opinion, the *post-mortem* examination was not calculated to throw any light on the matter. The floating of the lungs in water has been long exploded as a medical test.'"—*Berrows' Worcester Journal.*

This is a sample of the sort of *medico-legal* information which that "best possible public instructor"—the newspaper press—is in the habit of diffusing. The circumstance of having the name of a professional man attached to it, no doubt gives the paragraph an air of authority. But who, we should like to know, is this Mr. Llewellyn, who plays "will-o'-the wisp" on the occasion? If he be not a mere *nominis umbra*, perhaps he would favour us with a reason for the opinion which he volunteers so benevolently. To put the best construction on his conduct, he appears strongly disposed to save the accused at all hazards: but he is a very wrong-headed man if he thinks his bare assertion is to have any weight against the strong presumptions derivable from observation and experience. He is certainly a very ignorant or very dishonest person to state that the hydrostatic lung-test has been exploded: every well-informed medical man knows to the contrary. The phenomenon of the floating or sinking of the lungs, when observed with proper caution, is capable of affording a high degree of presumptive evidence as to the fact of live or still-birth; and when taken in conjunction with other appearances, of which Mr. Llewellyn seems to have not an idea, may constitute proof of the most convincing character. We pretend not to pronounce any opinion respecting the particular case of Charlotte Grounsel, for whom Mr. Llewellyn's sympathy is engaged: we should have facts before us, to warrant such a proceeding. Our

only object in noticing the above paragraph is to show what silly stuff sometimes comes before the public, under the sanction of a medical name. As to Mr. Llewellyn, if their really be such a person, we recommend him to look into his books, or ask some respectable brother practitioner what may the hydrostatic lung test mean. Till then, he had better throw a veil over his ignorance, and remain quiet.

THE NEW PHARMACOPŒIA.

The Order in Council which recently appeared in the *London Gazette* was a necessary preliminary before the new Pharmacopœia could be published. We understand that it will now appear almost immediately.

THE UNIVERSITY OF LONDON.

The Charter of the new University received the sign manual a few days ago. It requires, however, to be confirmed by Parliament before the parties in whose favour it is granted can enforce its provisions in the courts of law.

LECTURES ON LOCAL HYSTERICAL AFFECTIONS,

Delivered in the Medical Theatre of St. George's Hospital,

By Sir B. C. Brodie, Bart. F.R.S.

Lecture I.

Hysterical Affections of the Joints, particularly the Knee and Hip—their Characters—not confined to the Female Sex. Hysterical Disease of the Spine—Illustrations.

Gentlemen, — In commencing my course of lectures for the present season, it is not my intention to occupy your time by offering you any introductory observations. It seems to me that you hear a sufficient number of introductory lectures already, and, if I were to add to the list, I must inevitably trouble you with the repetition of what has been already said to you by your other teachers. For this reason, I think it advisable to enter at once on the consideration of some subject connected with practical surgery; and I am the more inclined to do so, as my course of lectures being of limited extent, I cannot well afford to devote any of them to other purposes.

I call these clinical lectures, because they are intended to illustrate the history and treatment of particular cases in the wards of the hospital. I do not intend, however, to confine myself absolutely to lectures of this description, and I may sometimes call your attention to a particular disease, or order of diseases, without reference to any of the patients who may be under my care at the time. My general rule will be to deliver lectures that are truly clinical; but the rule will have some exceptions, and one of these will occur in the beginning of the course. Those gentlemen who attended the hospital during the last spring, will remember that I promised to give some lectures illustrative of those local hysterical affections of which I have occasionally spoken to you in the wards. I fully intended at that time to redeem my promise during the summer months, but various circumstances having prevented my doing so, I propose to redeem it now.

When I was formerly engaged in the study of the diseases of the joints, having, at the period, to which I refer, few opportunities of investigating the subject except in my hospital practice, I occasionally met with cases in which a particular joint was affected with pain, and a great degree of morbid sensibility, attended occasionally with some degree of tumefaction of the soft parts, although the characteristic symptoms of the ordinary diseases to which these organs are liable were wanting, and the usual consequences of abscess and destruction of the joint did not ensue. For a long time these cases occasioned me great perplexity, and it was not until after I had published the first edition of my Treatise on the Diseases of the Joints that the occurrence of the case, which I am about to describe, first led me to suspect the real origin of the symptoms, which I had not comprehended formerly.

I was consulted concerning a young lady who complained of severe pain and a morbid tenderness of the knee, in the first instance attended with no perceptible enlargement of the joint. The remedies which, with such knowledge as I then possessed, I was led to recommend, gave her no relief; and after some time a slight degree of tumefaction took place, depending, as it seemed, either, on a fulness of the small vessels, or on an effusion of lymph or serum into the subcutaneous cellular texture. She had been in this state for a considerable time, when she was seized with a succession of violent paroxysms of hysteria, which terminated in an hysterical affection of the brain; so that she lay in a state approaching to that of coma, with dilatation of the pupils of the eyes. She was now attended by the late Dr. Babington and myself. I do not undertake to say whether the disease yielded to the remedies employed, or reached its natural termination; but, from one or other

of these causes, the patient recovered of the last-mentioned symptoms, and from that time she never complained of her knee.

Not long afterwards another young lady was brought to me, labouring under what had been supposed to be a scrofulous disease of the wrist. The resemblance of this case to that of the last-mentioned patient led me to doubt the correctness of this opinion, and the results proved my doubts to be not without foundation. She also was seized with a succession of violent paroxysms of hysteria; and when, after the lapse of many days, she had recovered from them, the disease of the wrist had vanished.

It seemed impossible to doubt that in each of these cases there was some connexion between the local symptoms and the constitutional disease under which the patient laboured; and a great number of other cases, which fell under my observation afterwards, confirmed me in the opinion; that where there is that state of the general system, whatever it may be, which produces the phænomena of hysteria, it is not uncommon for a particular joint to be affected with pain and morbid sensibility, such as may lead a superficial observer to believe that it is the seat of some serious local disease, although no such disease in reality exists.

In the second and subsequent editions of my Treatise on the Diseases of Joints, I have given some account of these local hysterical affections. I trust that what I have there stated may have been not wholly unacceptable to those, who are engaged in the practice of our art; but the subject is one of great interest both to the scientific pathologist and to the practical surgeon, and believing that I can furnish you with some information respecting it, beyond that which is to be found in my former publications, I am led to call your attention to it on the present occasion.

I have already mentioned, that when my opportunities of studying these diseases were limited to what I saw in the wards of the hospital, these affections of the joints fell occasionally under my observation. Since I have been engaged in a large private practice, they have presented themselves, I may say, without exaggeration, almost daily. This is easily explained. "*Fœminarum enim paucissimæ*," says the sagacious and observing Sydenham, speaking of hysteria, "*ab omni horum adfectuum specie prorsus liberæ sunt, si istas excipias quæ laboribus adsuetæ duram vitam trahunt.*" The liability to hysteria is, in fact, among females, one of the severest penalties of high civilization. It is among those who enjoy what are supposed to be the advantages of affluence and an easy life that we are to look for cases of this description, not among those who, fulfilling the edict of the Deity, "eat their bread in the sweat of their face." I do not hesitate to declare that among the higher classes of society, at least four-fifths of the female patients, who are commonly supposed to labour diseases of the joints, labour under hysteria, and nothing else.

Frequently the hip joint is the seat of the disease. The symptoms then have a considerable resemblance to those of diseases in the bones or cartilages, yet a minute examination of the case will rarely leave you in doubt as to your diagnosis.

There is pain in the hip and knee, which is aggravated by pressure and the motion of the limb, and the patient often lies fixed in one position on the bed or sofa. You will say, "are not these indications of a diseased hip joint?" But observe further. The pain is not in general fixed in any one part: it belongs to the whole limb. The patient winces, and sometimes screams, when you make pressure on the hip, but she does the same if you make pressure on the ileum, or on the side as high as the false ribs, or on the thigh, or even on the leg, as low as the ankle: and every where the morbid sensibility is chiefly in the integuments. If you pinch the skin, lifting it at the same time off the subjacent parts, the patient complains more than when you forcibly squeeze the head of the thigh-bone into the socket of the acetabulum. As her attention is more directed to the examination, so the pain, which she suffers from it, is aggravated; and if her mind be occupied in conversation, she will scarcely complain of that, which would have occasioned torture otherwise. Then, there is no wasting of the *glutæi* muscles, and no flattened appearance of the nates; and the aspect of the patient is different from that which you would expect to find if the bones and cartilages of a joint were in a state of ulceration. Neither are there those peculiar and painful startings of the limb at night, attended often with frightful dreams, which mark the existence of this last disease. The pain will sometimes prevent the patient falling asleep, but if once asleep, she sleeps soundly for many successive hours; and this state of things may continue for weeks, or months, or even for years, without leading to abscess, or any further ill consequences. There may be a suspicion of abscess, (I have known this in a great number of instances) but the suspicion is never realised. Sometimes there is a general tumefaction of the thigh and nates, the consequence either of a turgid state of the small vessels, or of an effusion into the cellular texture; (I suppose of the former, as the parts do not *pit*, or remain indented after pressure) but this

is entirely different from the swelling of an abscess. In a few rare instances there is a more defined and circumscribed swelling, but still it is altogether different from that of abscess. There is no perceptible fluctuation, and I can compare it to nothing better than a wheal of urticaria of unusual magnitude. A careful examination will always enable you to distinguish these swellings from abscess. For the satisfaction of others, I have sometimes made a puncture with a grooved needle, or some other convenient instrument, the introduction of which would have detected matter, if matter had existed.

I have said that, in these cases, there is no wasting of the glutæi muscles, and no flattened appearance of the nates. It is, however, not uncommon to find much alteration in the figure of the parts, of another kind; namely, a bulging of the pelvis posteriorly, at the same time that it is elevated on the side of the disease, so as to make an acute, instead of a right angle, with the column of the vertebræ. Of course, under these circumstances, the limb is apparently shortened, and when the patient stands erect, the heel does not come in contact with the ground. A superficial observer may be led to believe that there is an actual dislocation of the hip; and, indeed, it requires a careful examination to enable the surgeon to understand that all this strange distortion is but the result of the predominant action of certain muscles, and of a long-continued indulgence in an unnatural position.

When the symptoms are referred to the knee, they bear a near resemblance to those which have been just described. There is great tenderness of the joint; but the patient suffers more from pinching the skin than from pressure, and the morbid sensibility extends for some distance up the thigh, and down the leg, perhaps as low as the foot and ankle. The patient suffers less from an examination when the attention is fixed on other matters, than when it is directed to the affected parts; and she does not usually complain when pressure is made on the heel, so as to press the articulating surface of the tibia against that of the femur, provided that care be taken at the same time to produce no motion of the joint. In most instances the leg is kept extended on the thigh, whereas, in cases of real disease in the knee joint, it is usually a little bent. These symptoms may continue without any material alteration for an indefinite time; for weeks, or months, even for years, the joint retaining its natural size and figure: but occasionally a slight degree of tumefaction is observable, especially on the anterior part, over, and on each side of, the ligament of the patella. This tumefaction is not to be confounded with a general enlargement of the joint, by which surgeons are frequently misled, the result not of the disease, but of the remedies employed. I refer to cases which have been misunderstood, and mismanaged by the application of blisters, issues, and a succession of various counter-irritants.

What I have now stated may be sufficient to enable you to understand the nature of the symptoms which you may expect to find where these hysterical affections occur in the other joints of the extremities. The following observations are equally applicable to all these cases, and while they are necessary to complete the history, will be found of use in enabling you to form a correct diagnosis.

The patients thus affected are, for the most part, not much above the age of puberty.

In many instances they labour under some irregularity with respect to menstruation; while in others this function is in no respect different from what it is under circumstances of perfect health.

Those who labour under habitual coldness of the hands, have a weak small pulse, and afford other indications of a feeble circulation, are more liable than others to suffer in this manner; yet it is not very unusual to find these symptoms existing in combination with a florid countenance and a sufficient development of animal heat.

In some instances the joint to which the symptoms are referred, and even the whole limb, is affected with a remarkable alternation of heat and cold. Thus in the morning the limb may be cold, and of a pale or purple colour, as if there were scarcely any circulation of blood in it; while towards the afternoon it becomes warm, and in the evening is actually hot to the touch, with the vessels turgid and the skin shining. This state of things is often a source of serious alarm to the patient, and even to the medical attendant, but I never knew it to be followed by ill consequences.

The majority of the patients thus affected exhibit other proofs of their liability to hysteria. Sometimes they have been subject to the usual paroxysms of hysteria, which have ceased on the local symptoms showing themselves; and a recurrence of the former has been followed by an abatement of the latter, or by complete recovery from them.

Not unfrequently the origin of these symptoms may be traced to a severe illness, which has left the patient in a state of great physical exhaustion; at other

times they are as clearly to be attributed to some moral cause having a depressing influence on the constitution. In like manner the agency of moral causes, especially of those which compel the patient to make much physical exertion, often leads to her recovery. But we must not be led by this last-mentioned circumstance to adopt the harsh conclusion, that these symptoms exist only in those who are of a fanciful and wayward disposition. Young women of the highest moral qualities, and of the strongest understanding, are not exempt from these maladies; but it must at the same time be acknowledged that a cure is more easily attained in them than it is in others.

Although there are none of those painful and involuntary startings of the limbs which occur in combination with caries of the joints, spasmodic actions of the muscles of the limbs are not uncommon in the cases of which I am now speaking. In some cases convulsive motions of the limbs are produced by pinching, or more lightly touching the integuments. These bear no very distant resemblance to the movements of chorea; and it is worthy of notice, that they do not occur if it can be managed, at the same time, that the attention of the patient should be otherwise directed. I have also known them to take place independently of any manifest exciting cause. In the case to which I now more particularly refer, the limb was at irregular periods evidently agitated, so as almost to throw the patient off her couch.

In these cases there is always a sense of weakness in the limb, which for obvious reasons becomes aggravated in proportion as the muscles have been for a longer time in a state of inaction. While the pain and morbid sensibility of the joint are gradually subsiding, this sense of weakness increases, until at last it is the predominant symptom. Under these circumstances the patient often says, "I have no pain, but I cannot walk, because the limb is so weak." Weakness of the muscles, however, is not the only circumstance which interferes with the speedy recovery of the use of the limb in these cases. The tunics of the small blood-vessels, when the limb has been long kept in the horizontal posture, seem to partake of the condition of the muscles; and when the foot is first put to the ground, the skin assumes in consequence a red colour, sometimes amounting to a purple hue, as dark as that which, when limited to a particular spot, is often the precursor of a vesication.

The symptoms which have been described for the most part come on gradually. In the majority of cases they subside gradually also; but sometimes it is otherwise,—they may vanish without any evident cause. For example: in the year 1834 I was consulted respecting a young lady labouring under a well-marked hysterical affection, simulating disease of the hip-joint. As she was not a resident in London, I had no opportunity of watching the progress of the case, but I have lately received the following account of it from Dr. Mortimer, the surgeon of Haslar Hospital:—Her symptoms had continued nearly unaltered for nearly two years, when one night, on turning herself in bed, she said that she had a feeling as if something had given way in her hip, and from that moment she was quite well.

Another young lady was brought to London for my opinion in October, 1833. She also was supposed to labour under a disease of the hip-joint. After a careful examination of her case, I was satisfied that it was one of hysterical affection, and that there was no actual disease of the joint. I recommended her to leave her couch, to which she had been confined, and to take exercise, especially on horseback. Being a sensible and well-disposed person, she followed this advice, in spite, I doubt not, of a good deal of inconvenience in the first instance. After the lapse of a year, I received from her father the following statement respecting her:—"In pursuance of your advice, she began to use the limb more freely, but with little alteration as to pain and lameness until about six weeks ago, when, by a fall of the donkey on which she was riding, she was thrown over the animal's head, standing on the foot of the lame limb, with her weight upon it. She felt immediately what she describes as a sudden snap, as if something near the joint had given way. This was attended with a violent acute pain, which, however, lasted only a short time. She was replaced on the donkey, and rode home, a distance of four miles. To her great surprise the former habitual pain of the limb had entirely discontinued, and there has been no return of it since. She was able to walk up and down stairs without difficulty or pain, and now walks a considerable distance, using the one leg as freely and as well as the other. Her general health is improving rapidly, although she is still weak. There has been no hysterical fit since the accident; in short, the cure has been complete." However, in this case the cure was not permanent. Three months afterwards the complaint recurred, having the same character as formerly, except that it was not now com-

bined, as it had been in the previous attack, with other hysterical symptoms. She was at this time on the continent, and I have not heard the result of the case.

I have hitherto described these cases as if the symptoms were peculiar to the female sex; but it is not so in reality; and I have known several (though by comparison certainly rare) instances of males being affected in the same manner. I employ the term hysteria because it is in common use, and because it would be inconvenient to change it for another; but the etymology of it is undoubtedly calculated to lead to a great misapprehension with respect to the pathology of that disease. It belongs not to the uterus, but to the nervous system; and there is no one who is much engaged either in medical or in surgical practice, who will not be able to bear testimony to the accuracy of Sydenham's observation on this subject: — "*Quinimmo non pauci ex iis viris qui vitam degentes solitariam, chartes solent impallescere eódem morbo tentantur.*"

Hysterical affections, in which the symptoms are referred to the spine, are of very frequent occurrence. Such cases are, in many instances, mistaken for those of ulceration of the intervertebral cartilages and bodies of the vertebræ; and in consequence of this unfortunate impression on the minds of the medical attendants, I have known not a few, but very numerous, instances of young ladies being condemned to the horizontal posture, and even to the torture of caustic issues and setons, for several successive years, in whom air and exercise, and cheerful occupations, would probably have produced a cure in the course of a few months.

In these cases the patient complains of pain and tenderness of the back, to which one or more of the following symptoms may be superadded as those which chiefly tend to mislead the medical or surgical attendant: — Pains in the limbs, especially in the lower limbs; a sense of constriction of the chest; involuntary spasms of the muscles, sometimes induced by change of position, at other times recurring without any very evident cause; a sense of weakness in the lower limbs, so that they are scarcely capable of supporting the weight of the body; and even actual paralysis; difficulty of voiding the urine. When the patient first complains of pain in the back, it must be acknowledged that there is some difficulty in forming a positive diagnosis; but the difficulty vanishes afterwards, so that none but a superficial observer can have any doubt as to the real nature of the disease. The pain in the back is not confined to a single spot, but it extends to different regions of the spine, and it not unfrequently shifts its place from one part to another. The tenderness of the spine is peculiar. The morbid sensibility is chiefly in the skin, and the patient, for the most part, flinches more when the skin is even slightly pinched, than when pressure is made on the vertebræ themselves. The pain is, in the majority of cases, more severe than in those of real vertebral disease; and the spasms of the muscles have a near resemblance to those of chorea. Where there is paralysis, or a tendency to paralysis, it is quite different from what is observed in cases of pressure on the spinal cord or brain; and I may take this opportunity of observing, with respect to hysterical paralysis generally, that it has this peculiarity—*it is not that the muscles are incapable of obeying the act of volition, but that the function of volition is not exercised.* The accuraey of this observation will, if I am not much mistaken, be acknowledged by all those who are at the pains of studying these cases with the attention which they so well deserve; and the importance of it in medical and surgical practice is sufficiently obvious. There are still other circumstances which may assist us in forming our judgment; such as the general aspect of the patient, and her condition in other respects; her time of life; the state of the menstruation; and especially the liability to the more common hysterical affection.

Patients with a weak pulse, and cold hands and feet, are, on the whole, more liable to suffer in this manner than other persons. But this is almost a needless repetition. It would be sufficient for me to refer to what I have already stated in speaking of hysterical affections simulating diseases of the joints of the extremities.

I have frequently known surgeons to apply a hot sponge to the spine, believing that if the patient complained of pain on the application, this was a proof of the existence of caries. My own experience leads me to believe that a patient who labours under a nervous pain of the back will complain of the hot sponge even more than one in whom real disease exists. I mention this trifling matter, that you may avoid being misled by it in your diagnosis.

NEW-FANGLED DOCTRINES

RESPECTING THE TREATMENT OF INFLAMMATION.

To the Editor of the Medical Gazette.

Sir,

At a time like the present, when every thing around us appears to be undergoing a change—when long cherished medical theories and modes of practice are abandoned by some, and looked upon with scorn—it becomes, I think, the duty of professional men to make such strictures upon the new-fangled principles and opinions of the age, as they may think likely to be productive of benefit to the profession, and to their fellow-creatures. I shall, therefore, without further preamble, proceed to make a few remarks upon a paper which was published a short time ago, in a contemporary journal, by Mr. Searle, of Kennington, in which he endeavours to show that the practice usually followed in the treatment of acute inflammatory diseases, being founded upon erroneous principles, is absurd, and therefore ought to be abandoned.

Mr. Searle sets out by pronouncing a terrible condemnation upon the antiphlogistic plan of treatment. He then lays down certain rules for the treatment of inflammatory diseases, which, he says, are confounded "in science, in reason, and in nature," and in doing so, he divides the treatment into what he calls the treatment of the constitution, and the treatment of the local disease. Under the head of the treatment of the constitution, we are told that the predisposing cause of inflammatory fever being either a reduced or a low grade of muscular power, in order to prevent its accession, depletory means, which considerably diminish that power, should be carefully avoided; that the diet should be nutritious, without being unnecessarily stimulating; and that exercise, which is a salutary mode of preventing pyrexia, may be had recourse to in many cases during the first, and after the latter stages of, internal inflammation.

When inflammatory fever has commenced, measures for the removal of its predisposing cause, similar to the above, which are recommended for the prevention of the fever, Mr. Searle says ought to be adopted, limited only by the disability of the patient to pursue them so fully. Animal food in a solid form, he states, cannot, in general, be taken, if the fever be acute, but "milk, whey, beer, wine and water, eggs, or good broth, can be taken in small quantities, and frequently;" and he adds, that if nourishment be judiciously and fearlessly administered, the strength will gradually increase, while the irritability and consequent fever will be proportionally diminished.

The medicinal treatment, we are told, depends much upon the character of the inflammatory fever. When the general circulation is inordinately increased, and when considerable pyrexia attends subacute inflammation, sedative medicines, such as tartarized antimony and digitalis, are recommended, though upon what principle it is difficult to imagine; for every one must, I think, perceive, if it be right, in the dietetic treatment of the constitution, to increase the general circulation, by the fearless administration of milk, beer, wine and water, eggs, and good broth, that it cannot at the same time be proper, in the medicinal treatment, to lower the vascular action by means of tartarized antimony and digitalis. But it happens that this treatment can seldom be put into execution; for when emetic tartar is given in doses sufficiently large to produce a sedative effect, it never fails, at the same time, to cause severe nausea; so that when a patient is under the influence of that medicine, his stomach, which must be in a very unfit state to receive eggs and broth, will necessarily rebel against those good things, and either refuse them admittance, or eject them soon after their entrance. As far, therefore, as regards the constitution, it must, I think, be plain that the treatment recommended for it by Mr. Searle is inconsistent, and often impracticable.

Under the head of the treatment of the local disease, we are told that it is sometimes necessary to depress and sometimes to raise the circulation. The vascular action is to be depressed by means of tartarized antimony, when inflammation has been caused by excitement of the general circulation; but this is nothing more than the practice which is recommended for the treatment of the constitution. The vascular action is to be raised when inflammation of an internal organ has been brought on by any considerable depression of the circulation, as when the surface and extremities of the body have been exposed for several hours to wet and cold. In a case of this kind, sudorifics, warm baths, flannel clothing, and whatever excites the general circulation, are recommended; and when the feet remain cold, and the circulation continues languid, blisters or sinapisms to the patient's insteps, and diffusible stimulants, become, Mr. Searle states, indispensable, in order to raise the general circulation "to the level of that in the inflamed organ,"

whereby he thinks that the superabundant quantity of blood which exists in the diseased part will be reduced.

But let us suppose the internal organ which is affected to be the intestinal tube. What, in a case of this kind, would be the effect of Mr. Searle's stimulating plan of treatment, provided it could be followed, which will seldom be the case, because, in acute enteritis, the stomach is frequently so irritable that it ejects every thing? But admitting that diffusible stimulants could in such a case be taken by the patient, and kept in the stomach, what, I ask, would be their immediate effect? In consequence of the general circulation being raised, the vascular action in the extremities and outer surface of the body would be increased, and, at the same time, and in the same ratio, the action of the larger vessels in the diseased part; for I do not agree with Mr. Searle in opinion, that, by increasing the general circulation, we draw the blood, as it were, from the diseased over-loaded organ into the extremities and outer surface of the body. No; when the general circulation is increased, the blood is propelled, with increased force, throughout the whole of the body, and, therefore, as diffusible stimulants are general stimulants, and exert no specific local influence, to whatever extent the circulation may in any one part of the body be raised through their agency, it will to the same extent be raised in the larger vessels of the diseased organ, *above the state* in which it was before these medicines were administered; so that if this view be correct, it clearly follows, that to give diffusible stimulants in a case like the one now under consideration, would only be to add fuel to a raging flame.

But if we were to adopt a different practice: if, instead of giving diffusible stimulants, we were to open a vein, and to take away a large quantity of blood, and if the pulse, soon after this, were to rise and become fuller, as it generally does after bleeding in enteritis, we should in this way not only increase the vascular action in the extremities and outer surface of the body, but, at the same time, lessen the determination to the bowels, by removing from the body a considerable quantity of that very fluid, the presence of which, in the diseased part, is the immediate cause of the inflammation. This, which is the practice of the present day, is a practice founded upon reason; it is a practice which experience has led us to adopt; and it is a practice which, notwithstanding Mr. Searle's objections, will continue to be followed by all judicious physicians so long as the nature of inflammation remains unchanged.

But Mr. Searle strenuously opposes the antiphlogistic plan of treatment, on the ground that it consists of lowering measures; and yet he says that the circulation ought sometimes to be lowered, according to the primary cause which has given rise to the inflammation. What is this but antiphlogistic treatment? Surely, when we lower the circulation, we do so by antiphlogistic means,—by means which, we are told, are opposed to Mr. Searle's views, and which, he says, often destroy life when the disease would not. But, if inflammation ought always to be treated according to its primary cause, when that cause can be discovered, and if the primary causes of inflammation be numerous, and some even of *opposite* nature, as Mr. Searle admits, it follows that the treatment must vary according to the primary cause, and, therefore, that antiphlogistic measures cannot always be improper. For instance, when an inflammatory disease has been brought on by a cause the very opposite to one which would excite an inflammation, for the removal of which stimulants are requisite, the antiphlogistic or lowering treatment, in such a case, must, for obvious reasons, be the only treatment which could be had recourse to with any thing like a rational prospect of success.

But Mr. Searle will not admit this. He seems to have a strange antipathy to the words antiphlogistic treatment, and only to the *words;* for he admits, as has been shown, the principle upon which that plan of treatment is founded, and yet, when it is *called* antiphlogistic, his language respecting it, from the beginning to the end of his paper, is the language of condemnation; indeed he goes so far as to say, that "inflammation, like fever, is a bugbear;" that the strict antiphlogistic system of treatment is always injurious, and always of fatal tendency; and that its measures are tenfold more terrific than the disease itself.

Will it be believed that this is the language of a British surgeon in the year 1836? Surely some sort of a professional mania has broken out in the land. One man tells us that fractured thigh-bones may be cured, in an amazingly short space of time, by merely placing the patients in an easy position on a bed, and leaving them to nature and a pillow; another, that a few infinitessimal doses of common sulphur, each dose not being larger than a *billionth* part of a grain, will work wonders in removing some diseases over which no other kind of medicine would have any power; and a third soberly and seriously states, that the antiphlogistic plan of treatment, in acute inflammatory diseases,

ought to be carefully avoided—that if it were, for the first time, proposed for the consideration of the profesion, in this enlightened age, it would be treated with deserved contempt—and that if Hippocrates were to rise up from his grave, and to hear of nothing but the antiphlogistic treatment, he would offer a woful lament for mankind, because twenty-two centuries have produced, in the chief department of medical practice, nothing better than a rule without a reason. Surely, after this, no one will doubt that some such malady as the above-mentioned is spreading amongst us, and that if it continue, it may be attended with direful consequences.

I should not, however, have taken any notice of Mr. Searle's opinion respecting the treatment of inflammatory diseases, had his paper not been published in a journal which is pretty extensively circulated, particularly among the junior members of the profession; but, seeing that it holds a conspicuous place in the Lancet, and fearing, on that account, that some may suppose the stimulating part of Mr. Searle's practice to be approved of by the conductors of that work, which perhaps is the case, I consider it to be my duty to lift up my voice against it. If the above observations should act as a caveat, and be instrumental in causing any of my young professional brethren to pause and think before they adopt a practice which every man of experience must know to be fraught with danger, the object which I have in view, in forwarding this letter for publication in your truly excellent journal, will be accomplished.—I have the the honour to be, sir,

Your constant reader,
And most obedient servant,
INVESTIGATOR.

London, Oct. 17, 1836.

PARISH SURGEONS AND POOR LAW UNIONS.

To the Editor of the Medical Gazette.

SIR,

WILL you permit me, through the medium of your GAZETTE, to make a few observations on the following advertisement, which has lately appeared in the *Northampton Mercury*?

"LEIGHTON BUZZARD UNION.

"*To Medical Gentlemen.*

"The Board of Guardians are desirous of receiving applications from medical gentlemen, duly qualified, who may wish to fill the situation of medical officer of this Union.

"The Union consists of the following parishes:—Leighton Buzzard, Billington, Egginton, Heath and Reach, and Stanbridge, in Beds, — and Edlesborough, Ivinghoe, Slapton, Grove, Wing, Linslade, Soulbury, Cheddington, Martmore, and Stoke Hammond, in Bucks; and comprises a population of 11,800 persons.

"The gentleman appointed will be required to devote his whole time and attention to the duties of his situation, which will comprise, amongst other things, due and punctual attendance in all medical, surgical, and midwifery cases, and vaccination for all paupers; and he will provide, at his own cost, all medicine, drugs, and medical and surgical requisites, &c., trusses excepted. He will be required to enter on his duties on the 1st of December next, and to reside in the workhouse at Leighton Buzzard, where apartments (unfurnished) and stable-room will be provided for his accommodation.

"The salary will be 200*l.* a year.

"Testimonials of qualification, character, &c., accompanied by a letter, stating the age of the applicant, and whether he be married or single, to be sent, free of postage, addressed to the Clerk to the Board of Guardians, Leighton Buzzard, on or before the 20th October, instant.

"The Guardians, at the meeting of the Board, on the following day, propose to select from the gentlemen sending in testimonials, three applicants, who, on receiving an intimation to that effect, will be expected to attend in person at the next meeting, when it is intended that the appointment shall take place.

"The Board, however, do not pledge themselves to elect any applicant, unless fully satisfied of his eligibility.

"Leighton Buzzard, Beds.
Oct. 1, 1836."

In the first place, I cannot but observe how firmly resolved these gentlemen of the Board of Guardians are, to appoint no one as their surgeon who is not duly qualified for the office—will devote his whole time to its numerous duties—and can produce testimonials favourable to his character.

Now all this is exceedingly proper—no one can dispute it; but supposing any surgeon, possessing the requisite qualifications, were capable of fulfilling the duties of the situation (which I am confident the physical powers of no one man in existence are equal to), how is he to be remunerated? "The salary will be 200*l.* a year." How very inadequate a sum for providing medical and surgical attendance—medicines of all descriptions, and attendance on mid-

wifery cases, for a population of 11,800 persons, extended through fifteen country parishes! I am not acquainted with Leighton Buzzard, or its neighbourhood; but I know well what a country practice is, having been engaged in one for the last five-and-twenty years. Why, sir, the midwifery alone, extended over so wide a district, would be far more than any one person could accomplish: the number of cases occurring annually would probably be from twenty-seven to thirty for every thousand of the population. Can any person, having the slightest knowledge of the frequent, vexatious, though unavoidable, delays incident to midwifery practice, imagine it possible for any one individual to attend annually between 300 and 400 accouchements, scattered through fifteen country parishes?—an average of nearly one case every day! I can picture to myself the poor fellow, after riding hard through a dreary winter's day, returning, not to a quiet comfortable home and a happy domestic circle, but to his solitary apartment in a parish workhouse: there he sits in solitude, but not in quiet; for constantly is he assailed by the ceaseless din of its clamorous inmates;—in despair he retires to his couch, but scarcely has he stretched his weary limbs, and closed his eyes in slumber, ere a loud knocking at the outer gate, accompanied by an impatient shout, rouses him from a momentary oblivion: again must he mount his already jaded steed—again must he brave the inclemencies of a winter's night, and plunge through the mud of numerous intricate lanes, the only path to some wretched cottage four or five miles distant. Here he is compelled to wait the event of a tedious case, not unattended with hazard; seated by the side of a smoky fire, he rests his head against a pillow fastened to the wall by a fork to prevent its falling, and endeavours to procure a little sleep. Morning at length arrives, but his patient must not be left: anxiously he considers how he shall get through the various duties of the coming day. In the midst of his deliberations a hasty messenger, mounted on a panting cart-horse, demands his immediate attendance in an opposite part of the Union. What can he do?—how is he to proceed? His misery is complete;—no, far otherwise: before he has time to reply to the last messenger, another arrives with the intelligence that a man has been run over by a waggon, that his thigh is broken, and that he lies bleeding at a public-house about three miles distant. Where shall he look for assistance? The neighbouring practitioners will not afford it; if they do, the Board of Guardians will not pay them for their exertions, however urgent the case may be: he has taken the union, and must abide the consequences. Of this I have myself very lately had proof. But do not mistake me; I have not taken an union, nor will I take one. The case I allude to is briefly as follows:—A neighbouring surgeon, having a pauper patient in a very dangerous state, sent for me to consult with him on the propriety of an operation. I attended, at a distance of about five miles from my own home; the operation was decided on, and immediately performed. The Board of Gurdians referred the case to the Poor-Law Commissioners in London, who immediately refused to sanction any payment whatever.

But supposing it possible for any one man to accomplish the duties required, how very paltry the remuneration! Two hundred pounds per annum, for a man who has gone through the whole routine of his medical education, and, by passing his examinations, proved himself qualified for practice! I hope the various leeturers in London, when they give the farewell address to their pupils at the close of their several courses of lectures, will not fail to set forth, in proper colours, the various benefits arising from a Poor-Law Union. I hope the President of the Royal College of Surgeons, when the oath in which they swear to promote the dignity and welfare of the College is administered to the candidates for the diploma, will not fail to inform him, that, if they conduct themselves fairly and honourably in the practice of their profession, they may, in due time, expect to be promoted to the enviable situation of an Union surgeon; that should they be fortunate enough to obtain the Leighton Buzzard appointment, after they are completely worn out with its arduous duties, they may probably be permitted an asylum in the workhouse; and, after a life of ceaseless toil, finally close their eyes to this world, stretched on a miserable pallet in a ward crowded with paupers.

But to resume: the poor ought to be attended, during any illness with which they may be afflicted, by properly educated and duly authorized practitioners, members of the Royal College of Surgeons, at a good and sufficient salary, who should not be compelled to undertake an immense district, and forego all the advantages of private practice. The districts should in all cases be small, and manageable; if to the exclusion of private business, the salary should be much larger than where private practice is permitted. But, in each instance, the surgeon should be allowed, in urgent cases, to call in the assistance of a neighbouring practitioner, who should be properly remunerated for his services.

I have often wished that parish surgeons were appointed and paid by the government. Why not have government surgeons to parishes, as well as to ships and to regiments? How very differently, and how very easily, would the business be managed. Take the Leighton Buzzard Union, with its population of 11,800 persons, for instance. The Guardians propose to elect one surgeon, with a salary of 200*l.* a year, and apartments in the Workhouse.

Now, sir, let us look to the navy, and see how the affair is managed in that service. The crew of a first-rate ship of war, including officers, is 900 persons; therefore, the crews of thirteen first-rate ships would be 11,700 persons, 100 less than the Leighton Buzzard Union. All medicines are provided by government. Every ship is allowed one surgeon and three assistant-surgeons, all of whom are duly qualified for naval practice;—and how are these gentlemen paid? The ship is their home, and they have the ship's allowance of provisions: if they think proper to keep a more luxurious table, they are at liberty so to do. The net annual pay of a surgeon is 159*l.* 9*s.* 4*d.* in all rates: any increase of pay depends upon length of service, and not on the size of the ship. The net annual pay of an assistant surgeon is 119*l.* 12*s.* in all rates; consequently—

	£	*s.*	*d.*
The annual pay of 13 surgeons will be	2073	1	4
The annual pay of 39 assistant-surgeons (three to each ship)	4664	8	0
Total annual pay of the medical officers of 13 first-rate ships of war, containing 100 individuals less than the Leighton Buzzard Union, for which 200*l.* per annum is offered	6737	9	4

I am not so well acquainted with the pay and allowances of the army surgeons and assistants; but I have reason to believe that the difference is not great: I know there is an allowance for the keep of a horse.—I am, sir,

Your obedient servant,
AN OLD NAVY SURGEON.

Oct. 29, 1836.

TETANUS.

NOTE FROM MR. CURLING.

To the Editor of the Medical Gazette.

SIR,

IN the notice of my work on Tetanus in your last number, you refer to a case mentioned on the authority of Wepfer, in which it is stated, both in my Essay and in the GAZETTE, the disease proved fatal in *three* minutes. This is a misprint. It should have been *thirty* minutes, and stands corrected thus in the "Corrigenda." As the error makes a considerable difference in the case, you will oblige me by noticing it.—I am, sir,

Your obedient servant.
T. B. CURLING.

Mount Place, London Hospital,
October 31, 1836.

PATHOLOGY OF EPILEPSY.

DR. SEYMOUR'S LECTURE.

To the Editor of the Medical Gazette.

SIR,

YOUR GAZETTE of Saturday last contains a report of a clinical lecture by Dr. Seymour, in which it is stated that the Wenzels published a work some years ago, in which 30 cases of that disease are mentioned, and "in every one of these there was more or less disease of the *cerebellum*." Dr. John Sims* pointed out an error in this statement, and ascribed the mistake to the circumstance of the word "hirnanhang" (pituitary gland), having been incorrectly translated "cervelet," in a French version of Wenzel's work, with which English writers were better acquainted than with the original.

If Dr. Sims' remarks were correct (and I am not aware that they have been contradicted), it is desirable that the error should not be propagated by so respectable an authority as Dr. Seymour's.

I am, sir,
Your obedient servant,
W. R. BERNARD.

[Cheltenham, Nov. 1, 1836.]

CASE OF

EXTENSIVE AND DEEP-SEATED INJURY OF THE BRAIN,

Unattended by any disturbance of the intellect, and terminating favourably.

BY JAMES COUPER, Jun. M.D.
Of New Castle, Delaware.

ON the 13th of September, 1835, at 10 o'clock in the morning, a son of Mr. Allen of this neighbourhood, three and a half years old, of full size and perfect health, climbed to the top of a fence four feet

* See MEDICAL GAZETTE, Dec. 18, 1830.

eight inches in height, and when there lost his balance, and fell headlong on the opposite side. On that side of the fence there happened to be a pile of weather-boards, which had been taken from an old building. One of them rested on the ground, and extended to the spot upon which he fell. It was so firmly fixed by the weight of boards above it, as to be incapable of yielding to the impulse of a body falling on it, and through the end of it the sharp extremity of a *wrought* nail projected. In falling, the head of the child struck upon this nail. Its point entered the right parietal bone, just behind the central point of the right half of the coronal suture, and at the distance of half an inch from it. Its direction was, from the point of entrance, towards the centre of the base of the brain, and the part of it which entered the skull measured two inches and a quarter. After the head had been driven close up to the surface of the board by the perpendicular force of the fall, the child fell over on his right side, thus causing the point of the nail to describe a segment of a circle within the substance of the brain. The accident was first observed by a girl belonging to the family, who ran to the assistance of the child, and made several ineffectual efforts to relieve him by lifting up his body. Having failed in her attempts, she called to her aid a young man, who at first made like trials to release him, by raising his body from the ground. Defeated in these, he at last succeeded in extricating the boy from his distressed situation, by interlocking the fingers of both his hands beneath the head, and forcibly raising it off from the board. Upon the extraction of the nail, small portions of brain were found adhering to it, and other pieces afterwards came away from the wound. But little blood was lost; it amounted, perhaps, to two fluid ounces, and came principally from a minute arterial twig belonging to the scalp. When I first saw the patient, which was within an hour from the time of the accident, he had fallen asleep, but was readily aroused by my efforts to clear away the blood from the wound, and struggled resolutely to escape from them. During the afternoon of that day, he vomited freely several times. At ten o'clock at night, he was suddenly seized with total loss of power over the left side, but without any corresponding loss of sensation, or any paralytic affection of the tongue. His speech, both then and afterwards, was perfectly natural, as were also his eyes and the general expression of his countenance. Distinct attempts were made by the system to set up inflammatory action within the cranium on the second, fourth, fifth, and seventh days after the injury, but these were readily defeated by prompt and efficient depletory measures. A slight discharge continued to flow from the wound for about a week, and then ceased entirely. The paralysis has passed off regularly, but slowly. At this time (five months from the date of the accident), although the child runs about as usual, and exercises constantly and very freely without difficulty, there remains a slight general weakness of the arm, with a degree of defect in the power of the flexor and adductor muscles of the thigh of the affected side. The treatment of this case, in which I was aided in consultation by Dr. Baker, of Wilmington, consisted in the diligent use of free general and local depletion, together with those other measures by which inflammation of the brain may be prevented or removed. The preceding case appears to me to be interesting—

1. On account of the depth and extent to which the brain must have been broken up by the nail in its entrance, and its subsequent movements within the cranium, produced by the various ill-directed efforts to release the child.

2. From the fact that paralysis of the opposite side did not come on as an *immediate*, but *remote* effect of such serious injury to the brain, occurring at the end of twelve hours from the time of the accident, and that *suddenly*.

3. As exhibiting an instance of recovery after extensive *deep-seated* damage to the brain, and especially as proving that such important mischief within the skull does not necessarily impair the intellectual powers. No aberration of mind whatever was observed during the whole course of the case, although it was carefully watched with particular reference to this point*.

MR. WALFORD.

If the Editor of the Lancet is to be believed, a person named Walford has intimated to him, that he (the said Mr. Walford) was not privy to certain editorial articles which have recently appeared in this journal. For the information of all whom it may concern, we beg to state that no person of that name ever was, in any way, directly or indirectly, connected with the Medical Gazette, and that the circumstance alluded to, if it ever occurred, must either have been intended as a hoax upon Mr. Wakley, or be the result of some incomprehensible impertinence on the part of his correspondent.

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*. American Journal of Medical Sciences, for August 1836.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN NOVEMBER.

T. Ridout Tuck, Montague St., Russell Square.
J. R. Cole, Odiham, Hants.
W. T. Wilson, Armagh.
James Godfrey, London,
Thos. Talbot, Roscrea, Tipperary.
A. Cowie, St. Fergus, Aberdeenshire.
George Bury, Dublin.
Thos. Erskine, Cavan.
Mark A. B. Corbin, Guernsey.
G. E. Blinkins, Half-Moon-Street.
Frederick C. Lukis, Guernsey.
Wm. Jones, Bristol.
Richard J. Kilburne, Liverpool.
James T. Smith, Much Hadham.
John Henning, London.
H. F. Edwards, Brislington.
Henry Goodwin, Westmoreland, Jamaica.
W. Honeywood, Batavia.
J. Selkirk, Bury, Lancashire.
W. Hay, High Wycombe.
J. R. Gibson, London.
R. D. Harris, Torrington Park, Hornsey.
James Haines, Cheltenham.
Benjamin Collinette, Guernsey.
James Fletcher, Oldham.
Thomas Dwyer, Thurles, Tipperary.
Francis Hird, Richmond, Yorkshire.
Thomas Young, Nelson Sqnare.
William Holmes, Madras.
C. T. Thomson, Brightwell, near Wallingford.
Caleb Basan, London.
W. G. Everett, Devizes.
Jas, Brideoake, Leigh, Lancashire.
Wm. Cooke, Boston.
Joseph Williams, Clapham.

APOTHECARIES' HALL

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES, *Oct.* 27 *and Nov.* 3, 1836.

Thomas Adolphus Boyrenson, 13, Leman Street.
James William Ilott, Bromley, Kent.
John Herbert Patterson, Portsmouth.
Samuel Osborn, London.
Joseph John Lay, Peasenhall, Suffolk.
Augustus Slight, Portsmouth.
Joseph Lay Faulkner, Leeds, Yorkshire.
Arthur Paul, Winchester.
Thomas Richard Jackson, Congleton.
Richard Allatt, Brelton.
Thomas Cowdry, Batherston.
Charles Knevitt, Isleworth.
Thomas Stocks, Hattoft, Lincolnshire.
Richard Kinneir, Cricklade.
James Fletcher, Arundel, Sussex.
Manwaring Shurlock, Guildford.
John Hullock, Stockport.
James Richard Quick, St. Mawe's, Cornwall.
Robert Morley Lasalles, Stillington, Yorkshire.
Ebenezer Vorley, Carlton, Bedfordshire.
William James Best, Thetford, Norfolk.
Wm. Hodgson Peacock, Simmington, Yorkshire.
Thomas Hanley Barker, York.
William Atkinson, Leeds.
John Hare Gibson, Hull.
John Roberts Hogg, Brighton.
Samuel Maberly, Farnham.
John Dymock Scale, Cardiff.
Thomas Jones, Cwm Neath, Glamorganshire.
William Hibbit Moore, Woodbridge.
Richard Vicary Gorham, Wollesly, Suffolk.
Daniel Antrobus, Betley, Staffordshire.
John Morley, Barton-upon-Humber.
James Drew, Cambridge.
John Dungate Watt.
Augustine Valentine Dennis, Wells, Norfolk.
Edward Smith Walters, Cheadle.
Samuel Farrow, Loughborough.
William Deakins, Leicester.
William Gifford Everett, Devizes.

PORTRAIT OF HUFELAND.

A STRIKING likeness of the late Professor Hufeland, after Krüger, has just been published by Mr. Schloss. It is a very fine specimen of the lithographic art, and will form a companion portrait for the Tiedemann, lately brought out by the same publisher.

LITERARY INTELLIGENCE.

Sketch of the Comparative Anatomy of the Nervous System; with Remarks on its Development in the Human Embryo. Illustrated by plates. By John Anderson, M.E.S., Hon. Fellow of the Physical Society of Guy's Hospital. *In the press.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 1, 1836.

Age and Debility	17	Heart, diseased	2
Apoplexy	1	Hooping Cough	1
Asthma	7	Inflammation	8
Cancer	1	Bowels & Stomach	3
Consumption	29	Lungs and Pleura	2
Convulsions	17	Insanity	2
Croup	1	Liver, diseased	1
Dentition or Teething	3	Measles	10
Dropsy	8	Mortification	2
Dropsy on the Brain	7	Paralysis	3
Dysentery	1	Rheumatism	1
Erysipelas	3	Sore Throat and Quinsey	1
Fever	3	Thrush	1
Fever, Scarlet	4	Unknown Causes	10
Hæmorrhage	1		

Decrease of Burials, as compared with the preceding week . . 176

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Oct. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 27	from 37	to 52	29·62	to 29·86
Friday . . 28	31	42	29·87	29 73
Saturday . 29	24	43	29·42	29·72
Sunday . . 30	26	37	29·93	29·97
Monday . . 31	22	39	29·97	30·03
Nov.				
Tuesday . . 1	23	43	30·03	29·94
Wednesday 2	39	53	29·89	29·86

Prevailing winds, N.W. and W. by S.

Generally cloudy, with frequent rain. A heavy fall of snow on the morning of the 29th, averaging in depth about four inches.

Rain fallen, ·2125 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

"F." had better send us a sample of his facts and arguments: our pages are always impartially open for a fair trial; but *facts* must be authenticated with a real signature.

We have been obliged to postpone temporarily the letters of Mr. Flower and Mr. Hulbert, for want of room.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 12, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture VII.

Further Remarks on the Identity of Living Persons—Extraordinary case of alleged Abduction and contested Identity—Some recent Cases. Identity of Persons found Dead—Supposed remains of Hampden and Milton—The head of Charles I. identified—Identity of the victim essential in prosecutions for Murder—Remarkable instances of identification which have occurred in England and France—Inquiries relative to changing the colour of the Hair for the purpose of confounding identity—Hints for detection—Practical rules for the investigation of cases of doubtful identity.

I have given some instances of identity being mistaken in criminal prosecutions; eye-witnesses swearing positively to the identity of a wrong party. I shall add one example more, from the extraordinary case of Mary Squires, which occupied so much of public attention about the middle of the last century, and which to this hour has not been satisfactorily cleared up.

Extraordinary case of contested identity.—Mary Squires was an old gipsy-woman, who might have lived unnoticed, and died without remembrance, had not a prosecution for robbery, followed by sentence of death, fixed the public eye upon her. The circumstances of the case excited inquiry, and, according as prejudice or party operated, the convict became alternately an object of detestation, pity, or contempt. It appeared by the declaration on oath of Elizabeth Canning, a girl about eighteen years of age, that on the night of new-year's day, 1753, she was returning to her master's house, in Aldermanbury, from the neighbourhood of Rosemary-lane, when she was stopped, near Bethlem wall, Moorfields, by two men, who robbed her of her gown, apron, hat, and half a guinea, tied her hands behind her, and, on her struggling, gave her a violent blow on the temple, accompanied with oaths and execrations. She was then dragged to the house of one Mother Wells, at Enfield-Wash, where she saw Mary Squires. Squires made her overtures, as Canning understood her, to become a prostitute; and, upon her refusal, ripped up her stays, which she took from her, and, after many threats, thrust her into a back room, or hay-loft, where she was confined for twenty-eight days, without fire, or any kind of sustenance, except some pieces of bread, amounting to about a quartern loaf altogether, about a gallon of water in a pitcher, and a small minced pie which she accidentally had in her pocket.

During the whole of this time, Canning further declared that no human creature visited her. The bread and water being exhausted, she broke down a window-shutter, which was nailed, got out of the window on a sort of pent-house, and thence jumped to the ground, nine or ten feet below, according to her description. She reached home, by walking, as fast as her weak condition permitted.

The case became known, and immediately excited the sympathy and indignation of the public. A subscription was got up for the young woman. Squires and Wells were taken into custody, tried at the Old Bailey, and sentence of death passed on the former.

But Sir Crisp Gascoyne, the Lord Mayor, perceived that there were many contradictory points in Canning's evidence. Her description of the loft in which she was confined did not exactly tally with the room in Wells's house. A girl, too, one Vertue Hall, who had been a principal witness for the prosecution, retracted her

evidence, "having been threatened and frightened into what she had sworn." This girl had, in the first instance, corroborated the statement of Canning relative to the conversation at Enfield with Squires, and the ripping of the stays. A memorial was presented to the King, and the convict was respited for a few weeks. She ultimately received a free pardon, upon the law officers of the crown declaring that the weight of evidence was in her favour.

A re-action now took place; for if Squires was not guilty, Canning could not be innocent: the latter was accordingly indicted for perjury. Her trial, which did not come on for nearly twelve months after that of Squires, occupied five days: the witnesses were numerous, and their testimony of a very intricate and contradictory nature.

The question of Identity was the one on which the proceedings chiefly turned. Could Canning, and could a host of other persons, be mistaken in the appearance of Squires? The old woman had features of the most remarkable description. When the constable went with the warrant to apprehend her, she said to Canning, on being charged with robbing her of her stays,—"Do you say I robbed you? Look at me: if you have once seen my face, you must remember it, for God Almighty never made such another!"

It is said that when this part of the evidence was given in court, every eye was fixed on the old woman, whose countenance exhibited an assemblage of the most uncommon, and diabolically hideous features.

Yet thirty-six witnesses swore one way, and twenty-six another, as to seeing her at certain places about the same time. It appeared, according to one train of evidence, that the old gipsy was at Abbotsbury in Dorsetshire, from the 1st of January to the 9th; that she was in various places in Dorsetshire, Wiltshire, Hampshire, &c., from that time to the 18th; and that she did not arrive at the house of Mother Wells till the 23d. On the other hand, it was proved, or attempted to be proved, that she was, during this very time, seen nearly every day in the neighbourhood of Enfield.

The only *medical* evidence produced was that of a physician and an apothecary, who deposed to the languid and reduced state of Elizabeth Canning on her return to her mother's, and that she appeared like one who had suffered extreme hunger, thirst, and cold; but they acknowledged that a person might be as she was from other causes.

There were, however, several circumstances in the case that would have admitted of medico-legal elucidation. In a physical or physiological point of view, it is highly improbable that the girl could have subsisted for eight-and-twenty days on a quartern loaf and a gallon of water; or, at all events, if life remained, the sufferer should have been nearly exhausted from famine; her person should have exhibited striking proofs of starvation from cold and hunger: yet there is no reason to believe that such appearances were remarkable in the alleged sufferer.

Other minor but not less important points might have engaged the attention of the medical jurist. If Canning had been confined so closely in a hay-loft for so long a time, the natural excretions might have been referred to in proof; and the catamenia, also, would probably have left their traces. No notice, however, seems to have been bestowed on these things.

It has been already mentioned that Canning's account of the place of her incarceration was incorrect in certain particulars: it was, in fact, such an account as might have been trumped up from the description of somebody who had seen the place; but this was not all: some damning facts against this part of her evidence came out on the trial. A poor man, named Fortune Natus, proved that he and his wife slept in the room in which Canning swore she was confined, during the whole of that month, and for five or six weeks before. This testimony was also corroborated by Ezra Whiffin, a neighbour of Mother Wells, who being in want of a sign-board, and hearing that she had one to dispose of, called to see it, and accompanied Wells into the very room in question to seek for it. They there found it under some hay, which made part of the bed on which the wife of Natus was actually lying at the time—namely, on the 18th of January. It was not possible that Canning could have been in the room, or she must have been seen, and would probably have called for help. She had sworn, besides, that no person of any description had entered the room during the whole of her confinement.

I omit a great many other discrepancies and contradictions which came out in evidence. There were not less, it is said, than 120 witnesses examined altogether. The jury brought in a verdict of "wilful and corrupt perjury;" and the sentence was "transportation for seven years."

Yet, strange to say, many people still insisted on the innocence of Elizabeth Canning: the newspapers and periodicals of the time were filled with discussions on the subject. Fielding, the novelist, who was also a magistrate, wrote a pamphlet in Canning's favour; but he was replied

to with critical severity by Dr. (Sir John) Hill. To conclude the story, Canning was transported to New England, according to her sentence: there she married advantageously, and one of her original supporters left her a legacy of 500*l.* I may add, that before her departure, wishing doubtless to have the last word, she published a declaration in these terms:—"I declare in the most serious manner, that I am fully persuaded, and well assured, that Mary Squires was the person who robbed me, and that the house of Susannah Wells was the place in which I was confined for twenty-eight days!" It certainly has never been explained where she was during the twenty-eight days, if not in Mother Wells's hay-loft.

Such were the leading facts of a transaction which excited as much interest at the period as the *affaire* La Roncière has latterly done in France. In both, the testimony of a young female formed the chief ground of accusation against a prisoner; in both there has been room for medico-legal research; but the main features of the charge have been very different in each, as I may hereafter, in alluding more particularly to the La Roncière cause, have occasion to show.

Identity of a child.—The question of a child's identity was raised in a recent trial at Cambridge, for an assault. The parties were Wagstaff *v.* Bruyere. The prosecutrix (Miss Wagstaff) swore that she was the mother of a child which was carried away from her forcibly by Mr. Bruyere, and some police officers. Mr. Bruyere (brother-in-law of prosecutrix) proved that it was his wife's child which he took away, and that it was seven months younger than Miss Wagstaff's. A medical witness gave some important testimony. He had attended Mrs. Bruyere professionally in all her confinements, and he swore to the identity of the disputed child, "bringing forward some of the *most convincing reasons.*" What these reasons were I have not been able to learn; but it is probable they were certain personal marks and peculiarities. Much stress was laid upon the colour of the hair, the colour of the eyes, and the growth of the child. I need not more fully allude to this remarkable trial, of which you will find a good report in the *Times*, July 29, 1836; but I have no doubt that, had it occurred in France, it would have obtained a place among the *Causes célèbres.*

In another trial, for murder and robbery, which took place lately at the Exeter Summer Assizes, the identity of one of the prisoners was questioned: and the fact of his wanting one or two of the front teeth was particularly dwelt on by some of the witnesses.

But it may probably be said, that in most cases of this kind, the evidence of ordinary witnesses is as much to the purpose as that of medical men. There may be some force in the observation, though in most of the examples which I have quoted, medical evidence either was, or might have been, given with much advantage; but at all events, supposing that professional testimony may not greatly avail in identifying living persons, the case is different when we have to examine the dead: and this brings me to the second division of my subject—

Identity of the Dead,

Essentially medico-legal. — In investigations respecting the identity of individuals found dead, especially where the remains may be much decomposed, or reduced to a mere skeleton, medical men are obviously the fittest persons to be entrusted with such a task. Their familiarity with the appearances of the human subject, acquired during their anatomical and pathological studies, and their habit of observing the features and general aspect of the dying and the dead, render them the most capable of appreciating the alterations which dissolution and external influences usually produce.

Of the changes wrought in the human body during the progress of putrefaction under various circumstances, I shall hereafter have to treat with all the requisite detail. At present we shall confine ourselves to examples of the mode in which identity has been ascertained in doubtful cases, and conclude with some practical rules which may be beneficially employed by the medical jurist.

Remains of Hampden.—A curious inquiry was instituted in the year 1828, at Hampden Church, Buckinghamshire, by which, indeed, not exactly a medico-legal, but a medico-historical, point was to be determined. Hampden, the patriot, was known to be there buried: he had received a death-wound in the battle of Chalgrave Field, in 1643; but the nature of that wound, and the circumstances of his death, are variously related by historians. Lord Clarendon says he was shot in the shoulder with a brace of bullets, which broke the bone, and caused his death in three weeks; while another authority informs us that he died in the course of a few days, in consequence of the bursting of his pistol, which shattered his hand in a shocking manner. It was thought that a view of the body would settle the question; and a formal visit was made to the vaults in Hampden Church, for the purpose; but the result was not as favourable as might have been expected.

As there has been some controversy concerning the trustworthiness of the published reports of the examination, I

shall not enter into the details, referring you for the satisfaction of your curiosity on the subject to the Gentleman's Magazine for 1828. Thus much, however, relative to the disinterment, has been ascertained through the inquiries of Mr. Southey (I quote from his Letter *touching* Lord Nugent) :—" that search was made, in the place mentioned, for the body of Hampden, and, as the persons present understood, at the instance of Lord Nugent [his Lordship was at the time engaged on his Memorials of Hampden]; that several coffins were inspected, but not opened, because either the date did not agree with that of Hampden's death, or the inscription bore a different name; that one coffin was at length found, which had neither date nor inscription, and this was opened, although, from its form, it appears to have been older than his time. Mr. Norris, a surgeon of Risborough, examined the body, which was that of a very lusty man, the head covered with rich auburn hair, reaching beneath the shoulders: it was in high preservation, except that one arm crumbled off, owing to the action of the air, which had made its way to that part through a crack in the coffin; but there had been no amputation, nor operation of any kind."

Remains of Charles the First.—The search for the remains of King Charles the First, at St. George's Chapel, Windsor, in the year 1813, was more successful. It was conducted by Sir Henry Halford, in presence of the Prince Regent, and some members of the court. The particular vault in which the coffin was deposited had long remained unknown, though it was understood to be the one in which Henry the Eighth and one of his wives were laid. Accident led to its detection. A scroll, with name and date, served in some measure to authenticate the outer covering; but the examination of the head left not a doubt of the identity of the royal remains. Upon disengaging the face from the cere-cloth, which had been lined with an unctuous and resinous substance, apparently with a view to exclude the external air, the complexion of the skin was observed to be dark and discoloured. The forehead and temples had lost little or nothing of their muscular substance: the cartilage of the nose was gone; but the left eye, in the first moment of exposure, was open and full, though it vanished almost immediately; and the pointed beard, so characteristic of the period of the reign of King Charles, was perfect. The shape of the face was a long oval; many of the teeth remained; and the left ear, in consequence of the interposition of the unctuous matter between it and the cere-cloth, was found entire. The countenance, in short, notwithstanding its disfigurement, bore a strong resemblance to the coins, the busts, and especially to

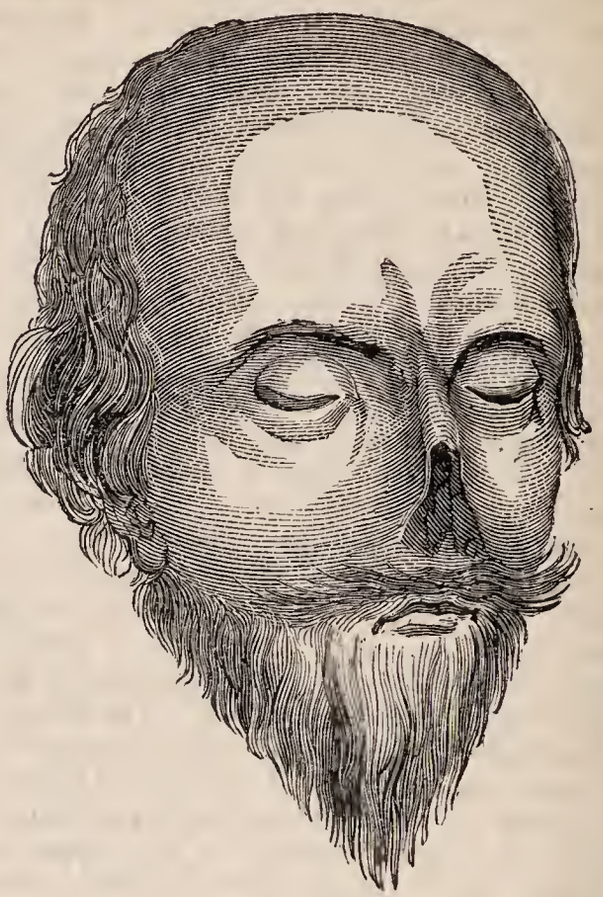

Fig. 15.

the pictures of Charles the First by Vandyke. Finally, the fourth cervical vertebra was found divided transversely—the corresponding surfaces being smooth, betokening that they had been separated by a heavy sharp instrument. I quote these particulars from the interesting narrative lately published by Sir Henry Halford.

Supposed remains of Milton.—When researches of this kind are attempted by incompetent persons, the most gross blunders are often committed. As an instance, I may mention a disinterment which took place some forty years ago, in this very neighbourhood. Milton was known to have been buried next his father, in the chancel of St. Giles's, Cripplegate. In August 1790, the spot where his body had been deposited was opened, and a corpse hastily supposed to be his was exposed to public view. But it was suspected by some, nay, asserted—nor has the assertion ever been disproved—that the disinterred corpse was that of a *female*. One gentleman (Mr. Capel Lofft), in censuring the "sordid mischief" committed on the occasion, and "the market made of the eagerness with which curiosity or admiration prompted persons to possess themselves of the supposed remains," tells us there was reason to believe that the said remains, so far from being Milton's, were "the bones of a person *not of the same age or sex!*"

Legal distinction.—When it is remembered that, consistently with our law, no man can be condemned for murder

unless the body or remains of his supposed victim be produced and identified, we must admit the deep importanee of attending to this subject. Eugene Aram made it a part of his ingenious defence, that the skeleton which was found *fourteen years* after the supposed murder, was not proved to be Clarke's; so far from it, that it was not even shown to be a male skeleton; and he argued, that the bones produced might have been those of some hermit who had, in former times, inhabited the cave where they were diseovered.

More satisfactory evidence of identity is required in modern trials. Several medieo legal disinterments might be referred to in proof of the faet. In the case of Maria Martin, who was murdered by Corder, evidence of the identity of the victim was obtained by exhuming her body after it had lain buried in a barn for eleven months. Mr. Lawton, the surgeon, gave evidence at the trial. He described the appearanees, by which the nature of her death was ascertained. The head of Maria Martin was identified chiefly by the absence of one or two teeth from the upper and lower jaw. Certain observations also, which were made on the state of the lungs, were important: there were adhesions of the pleura, and other marks, by which it appeared that the deecased had had eough and pain of the ehest not long before death—which was preeisely the case with this unfortunate young woman.

I have already mentioned the case of the late Marchioness of Salisbury, whose remains were identified by the jaw-bone having eertain appendages for artificial teeth. Another instanee of a similar kind may be worth quoting. Four medical students were prosecuted at Edinburgh some years since, for exhuming the body of a lady. It was necessary to identify the remains, and much diffieulty in this respeet arose from the very contradictory evidence of the medical witnesses as to certain appearances eonnected with the ovaries: the point, however, was eventually determined by a dentist, who produced a east of the gums which he had taken before death.

In the year 1814, Dupuytren identified the person of a murdered man, ehiefly by observing a coxo-femoral malformation under which the deceased must have laboured. The description of the parts, as given in the official report, (*Annales d'Hygiène*, vol. i.) is beautifully clear; but the following is perhaps all that properly belongs to our present subjeet; it constitutes the first part of the summing up, or *resumé* of the report: — "1. The body submitted to us was that of a man between 36 and 40 years of age. 2. He must have had, in infancy, disease of the two articulations of the thighs with the pelvis. And 3. This disease, though of old standing, and cured, must have left a remarkable deformity about the lower part of the trunk; and the individual, in his movements of progression, must have experieneed difficulties—probably lameness—certainly an unpleasant balaneing of the body on the lower limbs." M. Dupuytren then proceeds to shew that there was a differenee in the length of the limbs, and that the deceased must have walked chiefly on the toes of his right foot.

In another remarkable case investigated by MM. Laurent, Noble, and Vitry, at Versailles, in the year 1828, the remains of a man who had been murdered, and had lain buried in a eellar for about three years, were identified by noting an analogous malformation, which must have produced a certain degree of lameness. After stating the sex, age, stature, and other particulars relating to the skeleton, the reporters say in their conclusions:—"From the strueture of the bones of the pelvis, the depression of the fifth lumbar vertebra, the curvature of the bones of the legs, and more partieularly of those of the left side, whieh is six lines shorter than the right, the individual must have had raehitis in his infancy; and if he did not aetually halt, he must at least have leaned eonsiderably in his gait towards the left side."

A very singular case was investigated at Paris two or three years ago, one in which proof of identity was suceessfully dedueed from the relics of a female *eleven years* buried. I have already alluded to some of the cireumstanees; but they are altogether so striking, and so illustrative of the subject under consideration, that I shall read for you an abstraet of the offieial report drawn up by Orfila, Chevallier, Barruel, and Boys de Loury, the medico-legal examiners engaged in the investigation:—

In the year 1821, a widow lady, of the name of Houet, residing in the eity of Paris, disappeared; and eertain persons, Bastien, Robert, and Robert's wife, who had taken the house, No. 81, Rue de Vaugirard, were suspected of having made away with her. A judieial inquiry was pending for some time, in the Court of Assize; but the aecused, for want of evidence, had been set at liberty. Not long ago, however, some information was obtained touching a body said to have been buried for about eleven years in a partieular garden. An investigation was aecordingly set on foot; and by dint of patient and ably-directed research, such satisfactory evidence was proeured of the identity of the remains, and of the manner of the death, that the prisoners were convicted, and punished.

The first part of the inuiry—thebjuridical exhumation—was conducted by M. Boys de Loury. After excavating different parts of the garden for about five hours, one of the workmen hit upon a hollowed spot, in which there were bones. The greatest care was taken to uncover them with the least possible disturbanee; they were evidently those of a human body, reduced almost to a perfect skeleton. A drawing was made of the parts *in situ*. The figure reposed on the left side; the head was bent forward on the neck; the vertebral column was curved; the right fore-arm was raised, so that the bones of the hand nearly touched those of the face. The pelvis was turned obliquely upwards, resting on the left haunch. The thigh-bones were raised considerably, and the legs were crossed beneath them. The colour of the remains gencrally was betwcen an ochre and a brown; and when the earthy matter was removed from some of the long bones, the uncovered parts were found to be of a deep red colour.

The grave was four fect deep, funnel-shaped, measuring five feet and a half in length at its upper part, but at the bottom only two and a half: its greatest breadth was about two feet. Some lime-stone had been placed over the body, so as to form a sort of vault. Having made these general observations, the particular parts were next examined. The skull was small and lengthy in its shape: it scemed, by the way, from the position of the head, that the body had been thrown into the grave head foremost. The parietal boncs were very yielding: the sutures were well knit; the teeth white, and had been used with care: three molars were wanting, and one of the incisors was carious. A small quantity of light-coloured or ruddy hair was found, having some grey mixed with it.

The state of the neck was particularly striking. The third, fourth, fifth, and sixth cervical vertebræ, as well as the right clavicle, were held together by a blackish mass, in the composition of which there could not be recognized any tissue. *This mass was surrounded at its lower part by several twists of a cord two lines in diameter;* the cord was in a very decayed condition, and no knot could be found upon it. Minute attention was subsequently given to this *pièce de conviction*, and the obvious inference, that the deceased had been *strangled*, was fully borne out by all the direct and collateral circumstances.

Among the bones of the left hand was found a gold ring, of small diameter, carved in *facettes;* and several small well-formed finger-nails were also discovered. The pelvis, from its shape and proportions, could only be that of a woman. Some portion of cloth, probably part of a stocking, was found near the legs; but upon exposure to the air, it rapidly crumbled to dust.

I need not enter into a more minute detail of the several parts found. Other reporters, MM. Orfila, Mare, Barruel, and Chevallier, were afterwards added to M. Boys de Loury; and three or four elaborate documents were drawn up, of the first of which I shall read the *resumé*:—

"From the preceding facts, we feel ourselves justified in concluding,

"1. That these bones are those of a *human* skeleton.

"2. That the skeleton is that of a *female*.

"3. That this female had attained the *age* of from 60 to 70.

"4. That her stature was about 4 feet 8 or 9 inches (nearly 5 feet Eng,)

"5. That the hair of the female, which was of a bright blond colour in youth, was mixed with grey at the time of her death.

"6 That the hands were small.

"7. That during life, the bones had never suffered any injury.

"8. That this woman died of strangulation, and that the act was, to all appearance, homicidal; and

"9. That the body must have lain for several years in the earth."

A very ample report follows, stating the processes which were adopted for analyzing chemically the various debris about the body. Thus the earth at the bottom of the grave was examined, as were also certain concretions which were taken to be biliary calculi, and the softened masses in the neighbourhood of the pelvis: but nothing very important was detected in this search.

Justice was satisfied. The prisoners, who had been long suspected, were brought to trial and condemned. They were sentenced to foreed labour for the remainder of their lives.

Inquiries respecting the Hair.—I am reminded by the remark in the report just quoted, respecting the colour of the hair, that there have been some special inquiries made by Orfila and others on this subject, which are exceedingly interesting, in a medico-legal point of view. Circumstances occurred in Paris, a few years since, which rendered it necessary to inquire whether a man who was suspected of having committed a murder, could have changed the colour of his hair in a very extraordinary manner, in a short time. Certain witnesses deposed to having seen him in Paris, at two in the afternoon, with black hair; while others declared that they saw him at Versailles, with fair hair, at five or six o'clock the same evening. The man's hair was naturally jet black, and it does not appear that he wore a wig. The question, in consequence, proposed by the

law authorities to M. Orfila was, whether black hair could be dyed fair? Michalon, one of the first hair-dressers in the French metropolis, who was also consulted, gave his opinion that it was impossible; but M. Orfila stated that it was not only possible, but had been effected twenty-six years before, by Vauquelin, by means of chlorine.

The question, however, as M. Devergie observes, was not sufficiently definite. It should not have been simply whether the thing was possible, but whether, within a given time—say a few hours—hair could be changed from black to fair?—for no small part of the difficulty consisted in the journey to Versailles, in addition to the process employed, and all within three or four hours. Repeated trials made since by experienced hands seem to indicate it as an impossibility.

Means of darkening the hair.—It is well known that there are various methods in use for altering the colour of the hair: in general the object is to change red or sandy hair to a darker hue, to brown or black. Preparations of lead, silver, and bismuth, are employed for the purpose, lime or ammonia being first used to remove the fatty matter of the the hair; and a very common agent is a mixture or compound of lime and oxide of lead, called plombite of lime, of the mode of using which Mr. Percira gives an interesting account in his lectures*.

Tests. — But in these cases, as it is not difficult to attain the desired end, so neither is it to detect what has been done, by close inspection, or by reagents. The blackening depends on the formation of metallic sulphurets by the union of the lead, silver, or bismuth, with the sulphur either of the hair or of a solution of sulphuretted hydrogen applied for the purpose. Now, muriatic acid will extract the bismuth, and nitric acid the lead, from hair thus dyed; and by the proper tests, these metals may be readily detected in the resulting solutions. When nitrate of silver has been used, the process of detection will be a little different. Treat the hair with a solution of chlorine, by which chloride of silver is formed, which is soluble in ammonia, and again precipitable on the addition of nitric acid; in which state it may be readily detected by the usual means.

Means of making the hair of a lighter colour.—When the object is to render dark hair of a lighter colour, it is obtained by the employment of chlorine; first washing the hair with water of ammonia, in order to remove all greasiness. One part of strong liquid chlorine, diluted with four parts of water, will change, in the course of two hours, according to Orfila, black hair to dark chesnut. By successive immersions in a solution of the same strength, it will be brought to a bright chesnut. If the same hair be brought to a deep blond colour, it may ultimately be rendered a bright yellow, or white, with a yellowish tinge. Another effect of these successive and prolonged immersions, is to render the hair very stiff and brittle.

M. Devergie, in his experiments on this subject, has found, that when the chlorine is strong, it does not destroy the colour very uniformly; there may be seen in the hair experimented upon a variety of tints; nor is the full effect of whitening produced in less than twelve, fifteen, or twenty hours. In regard to the effect of combing out the hair in solution of chlorine, MM. Devergie and Orfila are at variance. Orfila says, that by this treatment he has brought black hair to a deep brown in a short time, and that probably, if the process were continued for several hours, and the solution employed were stronger, the result would be the same as that from maceration. But Devergie has tried the method in repeated instances at the Morgue, and has never produced more than very slight, if any, effects.

As medical jurists, I fancy we shall not often have to deal with circumstances like those described. Whoever wishes to dye his hair for the purpose of confounding his identity, will have to encounter difficulties which will probably lead to his detection. The altered colour is not permanent, since, as the hair grows, the new hair, or the new portion, has its usual colour; while in all cases the proceeding is troublesome, and must occupy considerable time. The requisite chemical knowledge, besides, for performing the process adroitly, is not common; and the probability, after all, is, that it cannot be done by any hands, however expert, uniformly, and so as not to display various tints on a nearer inspection.

We shall now proceed to sum up the principal points to be attended to in investigating cases of doubtful identity.

Practical rules.—M. Orfila has suggested a good set of practical rules, which we may adopt with some slight modification: 1. The determination of the sex and age of the individual should be effected, though the latter be only possible to be ascertained in a rude way. 2. The stature should be determined. 3. The form of the head and its size ought to be noticed: the hair, whether it be thin or thickly grown; whether the forehead is prominent or retreating; the eyes, whether large or small, sunken or projecting; the form of the nose, whether short, flat, broad, long, aquiline, or pointed; whether the lips are large or small—with or without scars; the teeth, as to number and regularity of arrangement; whether the mouth is big or little; the chin single or double, with a dimple—

* Medical Gazette, vol. xviii. p. 312.

pointed or round; the beard, whether thin or tufted; the size and shape of the countenance. 4. The neck, whether short and thick, or thin and remarkably long. 5. The chest, whether well or ill formed; the shape of the shoulders, with reference to the spinal column; whether there be traces of gibbosity, and in what way—whether anteriorly, posteriorly, or laterally; whether the individual have a flat sternum, or be what is called hen-breasted; whether the ensiform cartilage be remarkable for any deviation from the ordinary shape; the breadth between the two bases of the scapula. 6. The size or breadth of the pelvis. 7. The extremities: the feet and hands—whether bulky, clumsy, or otherwise; the fingers particularly, whether long or short, as compared with the hand or with one another; whether the knees are turned in, or bowed; the ankles projecting more than usual; the feet long or short, well proportioned, or broad and flat; whether there be any difference in the length of the legs, or any deformity. 8. Whether the genital organs, or other parts, have any peculiar malformation. 9. Congenital spots on the skin; for these are indelible, while warts or tumors of any kind may be removed by caustic. 10. Cicatrices from burns are good proofs of identity, or where they result from wounds or the spontaneous opening of tumors; for marks of this kind are never effaced, and may often, by reason of their situation, their form, their direction, or extent, furnish us with valuable indications. And, 11. Whether there be any traces of fractures or luxations.

These are all the marks and tokens of identity on which we as medical jurists can rely. As for a number of other points mentioned by authors—such as the beauty or ugliness of the individual, his leanness or plumpness, the colour of the eyes and hair—all these are capable of alterations in the course of time, and the latter, as we have seen, by art, which render them not to be depended on. The age of the person—the passions—the diseases to which he is subject—the climate in which he lives—the kind of life he leads—the nature of his diet, and a thousand other things, influence the body in respect to the transitory signs just mentioned. The well-known lines of Sir Walter Scott may perhaps be not inappropriately quoted:—

Danger, long travel, want, or *woe*,
Soon change the form that best we know;
For *deadly fear* can time outgo,
And blanch at once the hair.
Hard toil can roughen form and face,
And *want* can quench the eye's bright grace;
Nor does old age a wrinkle trace
More deeply than *despair*.

As for placing any reliance on mere resemblance, the testimony of ordinary observers, the recognition of parents, friends, and relations, or even very often on documentary evidence, which there are so many ways of forging, enough has been said to inculcate a proper degree of caution.

Ere I conclude I should wish to bring to your notice one case more, which, if not very instructive, may be at least amusing. About three years ago, a dead woman was taken out of the river at Blackfriars' bridge, and an inquest was held on her. She was identified as Eliza Baker, aged 17. A Mr. Wood first came forward and identified her: she had lived with him as a servant, but his wife growing jealous of her, she (Eliza Baker) was turned off. The master was evidently very much attached to the deceased, for he cut off a lock of her hair before the jury, and betrayed the utmost grief. He also fetched the deceased's parents: and they too, upon seeing the body, were loud in their lamentations. There were a number of witnesses examined, mostly relatives, and they all swore positively to the body. When Mr. Wood, the alleged seducer and destroyer of the girl's peace, was called upon to give his evidence, he was so overcome by his feelings at the melancholy occurrence, that nothing could be made of him; in fact, he was like a man in a state of stupefaction.

(I extract the remaining details from the *Times* report.)

"Mrs. Wood, the wife, was called in; she is twenty-eight years older than her husband, and shook her head at him, but nothing was elicited from her, her passion completely overcoming her reason.

A juryman.—The more we dive into this affair the more mysterious it appears against Mr. Wood.

This remark was occasioned on account of some marks of violence on the body; there had been a blow on the nose, a black mark on the forehead, and a severe wound on the thigh.

The jury were commencing to deliberate on their verdict, when a drayman in the employ of Messrs. Whitbread and Co., brewers, walked into the jury-room, and said that he wished to speak to the coroner and jury.

Mr. Carter.—What is it you want?

Drayman.—I comes to say, gentlemen, that Mrs. Baker's daughter, you are now holding an inquest on, is now alive and in good health.

The coroner and jury (in astonishment).—What do you say?

Drayman.—I'll swear that I met her to-day in the streets, and spoke to her.

The coroner, witnesses, and jury, were all struck with amazement, and asked the drayman if he could bring Eliza Baker forward, which he undertook to do in a short time.

In the interim the jury and witnesses went again to view the body of the deceased. Mr. Wood shed tears over the

corpse, and was greatly affected, as were all her relations. The drayman's story was treated as nonsense, but the jury, although of the same opinion, were determined to await his return.

In about a quarter of an hour the drayman returned, and introduced the real Eliza Baker, a fine looking young woman, and in full health!

Several of the jurors remarked that they never saw such a strong likeness in their lives as there was between Eliza Baker and the deceased, which fully accounted for the mistake that the witnesses had made.

The whole scene was most extraordinary, and the countenances of witnesses and jurymen it is impossible to describe.

There was no evidence to prove who the deceased was; and the jury, after about eleven hours' investigation, returned a verdict of 'Found drowned.'"

ON DRACUNCULUS.

(CIRCULAR.)

Bombay, May 9, 1836.

To the Medical Officers in Charge of H. M.'s Regiments.

SIR,

I BEG to transmit to you the following extract from a communication from the Director-General, upon the subject of the Inspection Report upon the Hospitals of this presidency:—

"You will, I hope, encourage by every means in your power the use of the stethoscope, an instrument the value of which is every day becoming more evident.

"The subject of Dracunculus is one, too, which is well worth the attention of the scientific inquirer; and I have to request a special report may be required from each medical officer under your superintendence, who may have had opportunities of investigating the subject. It may be sent with the next annual sick returns, but disjoined from them so as to admit of being bound up separately. It may facilitate the inquiry, if you will circulate a few queries to each medical officer, and transmit to me a copy of the same, as well as your own review of the answers."

With respect to this last subject of dracunculus, I beg to propose the queries which follow, as seeming to embrace the more important points of the inquiry; but still with the wish (as my own opportunities have been but desultory and infrequent) that officers would, if they see fit, modify or add to them, so as to comprehend, in the way most consonant with their own opinions, the whole subject which is thus submitted for our investigation.

It may be convenient to assume, as a consequence from very general assent, that the dracunculus is an animal within the tissue of the human body, and that it produces a disordered state of the part, which (disorder), although it may resemble other irregular actions, has the specific appellation of its cause; and having assumed so far, it remains to determine, if possible, its own nature—its times of appearance—its characters as disease—and the rationale of cure.

1. What is the organization of the dracunculus; and, as corollaries, what its mode of movement, of nutrition, and of reproduction?

2. Has climate (in the widest sense of the term), and has season, influence over its appearance in the human body? Does sex, age, or temperament, dispose or indispose to its appearance in the subject?

3. What the symptoms which mark the existence of dracunculus in a part?

4. Rationale of cure?

I have the honour to be, sir,
Your most obedient servant,
(Signed) CHARLES COLLIER,
Deputy Inspector-General.

This circular was addressed, in the month of May last, to each medical officer in charge of corps; and the several acknowledgments of it are herewith submitted. By these it appears that nothing has been added to their former knowledge of dracunculus, either upon the nature of the animal, its immediate influence upon the human body, or the principles of cure. Indeed, the whole of our knowledge concerning dracunculus may be comprised in the following theorems:—That it is an animal; that it appears in the cellular tissue of the body, and most frequently, but not universally, in the lower extremities; that, sooner or later, apparently while making its way to the surface, it causes disturbance of the part; and that this, like other local disturbances, affects the constitution variously, according to age, temperament, and state of health at the

time. Although nothing beyond mere conjecture has yet been offered respecting its production, its habitat, and mode of admission into the body, all are agreed that its presence is confined neither to person, to sex, nor to age—facts which make still more mysterious its nature, and still more difficult the application of prophylactics.

It is almost trivial to note, that the dracunculus is the Filaria medinensis, both of Cuvier and Lamarck; that the former has ranged it in his first Order, "Nematoidea," of Entozoa. The latter is a section of his second order of Vermes; and that both hold it to be essentially a zoophyte. The organization of Dracunculus has not been made out, it would appear, by any member of our service, and only one opportunity of examining a recent specimen ever offered itself to me; but from that examination I could satisfy myself upon little beyond the broad facts that it was an animal; that its body was tubular, and composed of two tunics; that these were fibrous; that there were nervous cords, or traces of cords like such, and that the contents of the tube were fluid. This is the extent of my knowledge of its structure, and although very scanty, yet but little more is given by either of the eminent naturalists who have been alluded to. The characteristic features of the class laid down by M. Cuvier seem to involve a contradiction or else an anomaly; and it is scarcely possible, after an attentive perusal of the description, to avoid the inference, that the author himself was hardly satisfied upon the subject, and, therefore, that his language became obscure and contradictory.

The difficulty, says M. Latreille (who compiled this part of the work) of conceiving how they (the Filariæ) attain the part where found, joined with the fact of their not having been observed out of the body, has given rise to the belief of spontaneous generation. It is now certain, not only that the greater part produce ova, or living prototypes, but many have sexual distinction, and copulate like ordinary animals *(animaux ordinaires)*. We may, then, believe that they are propagated by germs, small enough to be transmitted through the narrowest ways, or that often the animals in which they live bring with them, at their birth, the germs; in other terms, that the Entozoa may be connate.

This general description of the class, alike vague and contradictory, is not made clearer by either of these able naturalists in their account of the genus of Filaria; so that even after their labours, all the more interesting facts pertaining to Dracunculus are yet desiderata in science. "There can be perceived," it is further said by M. Latreille, in his account of the 'Class,' "neither tracheæ nor other organs of respiration, and, therefore, that the influence of the oxygen can be communicated only by the medium of the animals in which they live: they have no trace of a circulation, and traces only of nerves, but those so obscure, as to have justified doubts upon their existence at all." The description of the Dracunculus itself is well given both by M. Latreille and M. Lamarck, and it answers to that which is the subject of this paper—a body, long and filiform, having at its extremity the round opening of the mouth, resembling closely the Gordii; and again, "Corpus teres, filiforme, subæquale, lævigatum, sæpe longissimum, rigidiusculum. Os terminale, orbiculare, minimum."

The generic history of Filaria, by M. L., is not satisfactory, because it assumes what has never been proved, and also what would seem to be hardly compatible with the facts. After stating that it is very common in warm climates, it is said to insinuate itself *(s'insinue)* under the skin, especially of the legs, and there to develop itself to a length of ten feet and upwards; that it may remain there many years *(plusieurs années)* without exciting very evident sensations, but yet that sometimes it may produce, according to the part attacked, acute sufferings and violent convulsions: and when it does show itself, to be seen from without, then it is laid hold of, and drawn out very slowly from the dread of breaking it. Its size is that of a crow-quill. Its distinguishing feature is, the end of the tail being both hook-like and pointed.

It can scarcely be necessary to show the vagueness and the contradiction of much of this. After confessing the difficulty of conceiving how the Filariæ gain admission into the parenchyma, and acknowledging their never having been met with apart from the body, yet they are said to insinuate themselves beneath the skin, without one fact having been adduced to prove the entrance, or

one argument advanced to show its possibility. The Filariæ, like Entozoa, belong to zoophytes; and of them all our knowledge may be said to be negative, and therefore obscure: we know neither their origin, their mode of nutrition, nor how they attain the place where they are found.

It is observed by M. Lamarck, that, "for ages, during which observations have been going on, intestinal worms of acknowledged species have been met with no where but in the bodies of animals; no where, neither in the earth, the water, nor in the interior of plants, are their analogues to be met with."

With regard to its appearance in the body, the same author says it inhabits the subcutaneous cellular tissue, especially of the legs and feet of men, and only in the warm climates of Asia, Africa, and America. Is, he asks, the filaria developed there where it is found, or is it introduced from without? This (mode of introduction) is yet doubtful, and therefore its genus has been unsettled. Some individuals have been found more than two feet in length; there are species in other animal bodies (of the Simia genus), gracilis—of birds and fishes,—"attenuata,"—"ovata,"—cum aliis.

2. This branch of the subject has been discussed in great part already—climate has to do with the appearance of dracuncle, since it is found only in warm climates; but then as it is not found in all, (it is not found, for instance, at the Mauritius, which is basaltic, like Bombay (excepting in subjects sent there). Its topography tracked out is yet a desideratum; and as the greatest number of cases of it have occurred in the hottest months, season may seem to have something to do with its production; and yet, as if to baffle all such generalization, while common at Kirkee, not an instance of it has occurred in the contiguous cantonment of Poonah. The observation of Dr. Perston, which has been extensive, supports the inference that the male is more subject to it than the female, and the adult than the child; but relatively so only, for "all (he observes) are obnoxious to its invasion." Dracunculus is very widely known; in fact, over India it exists under varying conditions of subjects, soil, water, and even temperature; but whether it be found on ground so high as to cause a lower mean average temperature than the plains, there is no facts to show.

3. The pathognomonic signs of the presence of dracunculus in a part, is the appearance of a bleb (bulla), or large vesicle, with, as it may be supposed, inflammation, greater or less in extent and in intensity, according to circumstances: at the bursting of the vesicle, a small circular aperture is perceived, and soon the end of the worm is found, either projecting through, or else beneath it. As this is the commencement of the worm's passage outward in most instances, so a bulla becomes a proof, although not universally good, of the animal's existence beneath. Exceptions to this law are noted by M. Latreille, and, indeed, both by Dr. Perston and by Dr. Wilkins. Sometimes the worm may be felt beneath the skin, without the party having been conscious of its presence; sometimes, on the contrary, the part may be tumid and red, and painful, without any trace at the moment of the animal; and again, a sudden sense of pain, as from a thorn, and then, as Mr. Wilkins has observed, the dracuncle to be manifested. But the pathognomonic sign, subject, as it has been said, to some exception, is, a bleb, with slight surrounding inflammation, and at the rupture of the cuticle a small circular aperture: beneath which lies the worm; constitutional sympathy depends upon appreciable causes, of course, but this, when all conditions are estimated, may be affirmed to be strangely low. There is a tact in detecting dracunculus, which, like all experimental knowledge, may be gotten only by practice. Experience is required, that is, for the diagnosis, as it is, for the surer removal of the cause; but this leads me to the last of the considerations.

The rationale of cure consists in the removal of the worm whole, (for, if broken in the attempt, the fluid exuded from it excites higher inflammation) if possible; but if that may not be, by gradual extraction, day by day, taking care to retain the part already drawn, by a simple yet easy apparatus. This is the method followed by the native medical men as well; and, indeed, as it is not possible to follow, in many instances, the windings of the worm, and as further mischief results from it if ruptured, it seems to be the the only one practicable; there is some

tact, of course, required for the practice, but, then, it is a tact which is easily gotten. Warm, or rather hot, fomentations are preferred, while the worm is yet in its nidus, and so they are, indeed, through all the subsequent processes. It has appeared to me, and the suggestion has been offered, that evaporation by cold lotions would act better; but my clinical opportunities have been too few to give terms for comparison. The method of extraction is, no doubt, tedious (the average period of cure being not less than a month), and it acts prejudicially, by the confinement and the suffering, upon the health; sometimes, also, especially when in the neighbourhood of a large joint, the local inflammation is so vehement and extensive as to be a source of sinuses and other and further mischief than had first been done. As such consequences, when they do happen, come within the general domain of surgery, they need not be dwelt upon here. The constitution is to be attended to, and the actions of the part quieted by position, by free openings for the discharge of fluids, and by suitable applications.

It has sometimes occurred to me, I confess, that it would be better, when dracunculus had made its appearance in a part, if the whole matter were taken into the hands of the surgeon; the worm extracted by incisions, if possible, and if not, extracted entire, believing that such would, by their own operation, be preferable to the process resorted to; but more opportunity, and the consideration of others' opinions, have altered, or modified at least, that impression.

To sum up, then, what is known at this presidency, upon dracunculus and its treatment, in order that our knowledge may be compared with, and elucidated by, inquiries at other places, the following generalization is submitted:—

I. Dracunculus is a round thread-like worm, attaining a length of *two feet and upwards; and it is found in the parenchyma of the human body, extensively over India, without much respect for age, or sex, or condition. Its appearance, though not confined to, is most common in, the hot dry months; but then capriciously appearing, in many instances, at one place, and not at all at another in its neighbourhood. The worm consists of two tunics, which are evidently fibrous; it is furnished with an orbicular mouth at one end, at the other (which is pointed and curved) is the anus, and a tube or alimentary canal is extended, probably, between them. There are traces to be perceived of what appear like nervous cords, but here is closed our knowledge upon its structure. Nothing is known about its circulation, if any, its mode of nutrition, reproduction, or existence in the part where found; all these general facts belong, indeed, to that vast family of Being at its source, where objects, by their minuteness, and by, so to say, their peculiarities of existence, baffle observation and elude inquiry. Speculation may be hazarded, but speculation can form no base for therapeutics.

II. Climate has to do, no doubt, with dracunculus, since it does not exist, so far as it has been hitherto learnt, excepting in warm latitudes, but then not continuously; preferring, whatever the cause may be, one spot to another, and the hottest dryest months are those most suited for its development; but, under suitable circumstances, there is no exemption to be found in age, or sex, or condition of life.

III. The symptoms are a bleb, or else a large vesicle, with slight surrounding inflammation, and, at the bursting of the cuticle, a circular aperture to the worm beneath; occasionally erythematous appearance, without bleb or vesicle; sometimes the worm itself to be felt under the cuticle, without local action or disturbance of any kind.

IV. The removal of the worm whole, if possible, at once; if not possible, whether from local attachment or from depth of situation, then by the process of extraction, which is well described by the officers who have seen much of the affection.

This method, or process, is soon acquired, as it is easily practised (indeed the patient mostly ministers to himself), and it involves very little pain. The objections to it are its tediousness, and the injury which may be sustained by the health during the period of cure. Now it was to avoid both these results that a bolder surgery offered itself to me as preferable; assuming that, at the

* This, which is the length of the animal, as given by M. Lamarck, is confirmed by the experience of medical officers here. Dr. Perston has never seen one which exceeded three feet, but Latreille affirms, upon others' authority, that it does sometimes exceed even ten feet.

worst, failing to remove the worm at once, it would still place parts in a better state for supporting the secondary actions, and to expedite recovery. But this impression has been much modified, both by my own and by others' experience, and I am now content to witness the slow process of extraction, as being, on the whole, the safer mode of cure. The matter is altogether peculiar, and so must be, apparently, the management of it.

CHARLES COLLIER.
Dep. Insp. Gen. Hosp.

CASE OF COMPOUND DISLOCATION OF THE ASTRAGALUS AND OS NAVICULARE.

To the Editor of the Medical Gazette.

SIR,

I BEG to inclose you a very rare case of compound dislocation of the astragalus and os naviculare, if you have room to place it in your valuable journal.—I am, sir,

Your obedient servant,
C. M. BURNETT.

Alton, Hants,
July 10, 1836*.

Colonel G—— is an active man, of a spare habit of body, upwards of 60 years of age. On the 23d of February last he was fox-hunting, and had made a leap, when suddenly he found himself unable to follow, in consequence of his right foot being displaced. His usual habit was to ride in his stirrup, the foot resting on its outer side. When I first saw him the boot had been removed, which, from the force of the injury, had given way, the bones protruding through it. The foot was dislocated inwards, at right angles with the leg; and two bones were plainly to be seen projecting out of a wound, which was about three inches in length, extending across the outer ankle.

I carefully examined the situation and shape of these bones: the upper one, the os naviculare, had projected its cuneiform surface outwards and forwards, in an oblique direction; and the other bone was the astragalus, which had forsaken its natural cavity, was driven forwards and outwards, and presenting that surface which in its natural position would be in contact with the os calcis. I steadily kept pressure as firmly as I could, for nearly a quarter of an hour, upon the prominent os naviculare, in the direction of the joint, to which I was directed by the ends of the tibia, which was plainly to be seen beneath the astragalus. At the expiration of this time I had the satisfaction to see the bones slip into their proper places, and the foot resume its natural character. The end of the fibula was not fractured. Having placed the limb in proper splints, I conducted him home, where he was met by his family surgeon, Mr. Wickham, of Winchester, in whose able hands I had every satisfaction in knowing it would be watched with an active and intelligent eye. The case has done remarkably well; and by a letter which I have received from Mr. Wickham, he tells me—"I am able now to inform you that Colonel G——'s case has been brought to the most satisfactory termination. The wound is healed, the motion of the joint is perfect, and the swelling of the part is nearly reduced. Weakness, which time only can remove, and the occasional puffiness from use, are the only remaining effects of the injury. You are aware that the progress of the case has scarcely been interrupted, and that inflammatory symptoms only once occurred during the period of his confinement; these were ushered in by a rigor and succeeding heat; they occurred about three weeks after the accident, and only lasted a few hours. At present he is able to walk with crutches, without the least inconvenience, and the limb bears occasionally its share of the weight of the body. As to the motion of the joint, it cannot only be performed by myself, but he can freely bend and extend the foot."

Upon this very interesting case allow me to make a few observations.

As I have not been able to hear or read of a similar case to this, it may be doubted whether the os naviculare was really displaced; but of the existence of the fact I cannot be deceived, for I saw and felt both this bone and the astragalus before they were reduced. And as I was enabled, by keeping up a long-continued pressure in the most favourable direction, to reduce the joint

* The paper only reached us last week.—ED. GAZ.

to its natural state, it is reasonable to infer, in all cases where the astragalus alone has been dislocated, that it may by perseverance be replaced; although we admit, where dislocation of the foot has not taken place, this operation is rendered more difficult. The consequences of this bone not being replaced involve its death and subsequent extraction, if amputation be not resorted to previously, to shorten the process of mortification which would otherwise take place. Delpech mentions three ways in which the astragalus can be dislocated*, one of which, where "the bone is completely thrust out of its natural position, and thrown upon the dorsal surface of the tarsus," is the nearest approach to the present case; for here it would have taken its place on the dorsal surface, accompanied by the os naviculare, had not the tarsus been dislocated inwards. He says, "in a case of lateral luxation of the foot, we have seen the astragalus completely thrown out of its natural position, and carried on the dorsal surface of the cuboid bone; and what is still more singular, notwithstanding the great displacement, which supposes a complete isolation of the bone, on making use of the necessary extensions on the leg and foot, while making at the same time compressions upon the astragalus, in a direction from before backwards, it was brought back into its natural situation, the luxation of the foot was reduced, and an easy and rapid cure was obtained; and the bone thus displaced preserved from necrosis†." It seems, if the astragalus is to be preserved, and the joint completely restored, it must be reduced. In those cases recorded, where this bone has not been reduced‡, necrosis has taken place, followed by its discharge or extraction; and though the foot has been spared, it has been at the expense of shortening, and almost anchylosis.

There is every probability, if the dislocation in the present case had not been reduced, that the displacement of the two bones would have occasioned the loss of the entire foot.

* Delpech, Maladies Chirurgicales, vol. iii. p. 139.
† Ib. p. 140.
‡ See Medical Gazette, vol. i. p. 624; vol. xi. p. 527.

TWO CASES OF PERICARDITIS;

WITH AUSCULTATORY DIAGNOSIS AND REMARKS.

To the Editor of the Medical Gazette.

Sir,

About twelve months since I read before the Physical Society of Guy's Hospital "Some Observations on the Diagnosis of Pericarditis," which, considerably contracted, were afterwards published in the first number of the "Guy's Hospital Reports." In that paper I made no mention of Dr. Watson as one of the contributors to the pathology of this disease. I think it, therefore, due both to that gentleman and myself, to state, that the cause of this omission was my ignorance of the fact of his having written upon the complaint, and that, till 22d instant, when looking over the sixteenth volume of the Medical Gazette for another purpose, I had never enjoyed the advantage of reading his clinical lectures upon the subject. This, sir, to myself is a misfortune, as, agreeing with Dr. Watson in many important particulars, in some of which we both differ from some recent writers upon pericarditis; and having both arrived at our conclusions after strict observation of the disease, and without any communication on the subject, I should have been highly gratified to have been enabled to advance so distinguished a name as that of Dr. Watson, as a supporter of the opinions I then advocated.

In some minor particulars I differ from that gentleman, as will be seen by the observations appended to the two cases I herewith send, should you consider them suitable for the pages of your journal. The former occurred many months since, and I regret that but few notes were taken; it is therefore brief and general: the latter has taken place very recently, and is therefore more copiously and particularly detailed.—I am, sir,

Your obedient servant,
H. M. Hughes, M.D.

13, Wellington-street, Southwark,
Oct. 29, 1836.

Case I.—H. W., aged 18, a thin delicate youth, of pale face and light complexion, after exposure to wet and cold, became affected with rheumatism of a

subacute character, for which he came under medical treatment on the 15th of April. He was bled, and took the common medicines for rheumatism with very great relief. On the 18th, it was discovered that he had pain, and some tenderness on pressure, at the scrobiculus cordis, and at the intercostal spaces over the præcordial region. He constantly maintained the recumbent position without inconvenience, and turned to either side without much distress; though his pain was slightly increased by lying on the left, and his easiest posture was with the body partially turned towards the right side. He had no cough; his respiration was but very slightly hurried; his tongue was white and moist; and his pulse rather frequent, thrilling, and regular. The chest was resonant on percussion, and there was no unusual dulness in the præcordial region; the respiratory murmur was natural. The impulse of the heart was sharp, but not heaving; and its rhythm, as far as it could be ascertained, appeared normal. The first sound was replaced, or masked, by a *bruit de soufflet*, which was heard over the whole heart, but most clearly in the situation of the aortic valves; the second sound was scarcely audible. On the outer side of the left nipple was distinctly heard a double rubbing sound, the *frottement* of the French authors and Dr. Stokes, the "*to-and-fro* sound" of Dr. Watson. It had no similitude to the *creaking* of new leather, but exactly resembled the noise produced by the friction of two rough and rather soft surfaces. It was confined to a small circumscribed space, was very superficial, and perfectly distinct from the bruit de soufflet; which, moreover, appeared to be produced only during the systole, whereas the frottement evidently accompanied both the systole and diastole of the ventricles.

He was ordered to be cupped over the region of the heart, and to take Calomel, gr. j.; James's Powder, gr. iv.; Ext of Henbane, gr. iij. every four hours, in a simple saline draught.

On the 20th the gums were slightly affected; the pain was rather less; the rubbing sound less distinct, and heard over a still smaller space; but the bellows sound remained as before.

The pills, &c. to be continued three times a day only.

On the 23d the frottement had nearly, or quite disappeared. The soufflet was still distinct; and some pain and tenderness remaining, fifteen leeches were applied with temporary relief.

On the 27th, some pain still existing, twenty more leeches were applied. The frottement had entirely ceased, but the bruit de soufflet was yet very distinct; the respiration remained but very little affected.

He was now ordered Antim. Tart. gr. $\frac{1}{4}$, Opium, gr. $\frac{1}{2}$, and Calomel, gr. ij. every night; and a mixture with Tr. Digitalis, ℥x.; Nitr. Potass. gr. xv.; and Sp. Æther. Nitr. ℥xv. three times a day.

About ten days after this he had some slight return of pain, for which, on May 7th, a blister was applied with benefit. On the 11th he was ordered decoct. cinchon. and sulphuric acid, and in a week or two returned to his employment, previously to which I ascertained that though the impulse of the heart was rather feeble, its rhythm and sounds were natural, and that no bruit de soufflet, even after walking briskly for a short distance, could now be discovered.

Case II.—Samuel Barney, aged 31, a thin delicate-looking man, of light complexion and lymphatic temperament, became a patient of the Surrey Dispensary, under my care, 27th Sept. last. He is by occupation a dancing and music master, and has been very regular in his habits. He has been married six years, but has had no children. He has on two occasions previously been the subject of rheumatism; and though he does not recollect to have been affected at such times with dyspnœa, palpitation, or any symptoms of thoracic obstruction, he has been very liable to catarrh, and has more than once been confined in consequence of pain of the left side; and for the last year, when exerting himself more laboriously than ordinarily, has been troubled with dyspnœa, pleurodynia, and palpitation.

Two weeks previously to my seeing him, after exposure to cold and wet, he was attacked with rheumatic pains of the limbs, the increase of which had, for the last six or seven days, confined him to bed. I found him at my first visit labouring under subacute rheumatism. The wrists and ankles were swollen, rather red, painful, and very tender; the

tongue was clean and moist, with the exception of two broad lateral furred lines; the margins of the gums were ulcerated; the countenance appeared natural; the pulse 116, small, fluid, and regular; the respirations 22, and unembarrassed. He had no cough, nor any thoracic uneasiness, when perfectly quiet, but on deep inspiration felt some pain under the left breast, which I ascertained had first appeared on the previous day; he lay flat in his bed, and felt no inconvenience (except from pain of the extremities in the act of moving) by turning to the right side, though some uneasiness was produced by inclining to the left. There was some tenderness on pressure below the ensiform cartilage, but *none* at the intercostal spaces over the heart. The chest was generally fairly resonant on percussion, but considerable dulness and some contraction existed over the lower ribs on the left side, near the heart; the remainder of the præcordial region was not more dull than natural. The impulse of the heart was weak; the rhythm could not be ascertained, as, excepting over the ensiform cartilage, where it was indistinctly audible, the double flap of the healthy heart was replaced by an extensively diffused superficial rubbing noise, most distinct about one inch on the inner side of the left nipple, but more harsh and grating on the outer side of the same point; the former resembling the friction of two pieces of cloth, the latter that of rough horny surfaces. This sound did not accompany merely the first or second sound of the organ, but obscured both, and, though varying in intensity, appeared to be without intermission. The respiratory murmur was audible over the chest, excepting at the base of the left lung.

Ordered Hirudines, x. parti dolent. Antim. Tart. gr. $\frac{1}{6}$. Opii, gr. $\frac{1}{4}$. Hyd. Submur. gr. j. 4tis. horis; et Magnes. Sulph. ℥ss. Vin. Colch. ℥ss. Mist. Camph. ℥iss. ter die.

The next day I found the symptoms little changed; the pain as before; the bowels only once relieved, and then not from medicine.

V. S. ℥x. vel prim. sign. deliquii. Rep. Pil. cont. Mist. ad plm. alv. solutionem.

29th.—The bowels had been freely acted upon by medicine, the wrists and ankles were quite free from pain and tenderness; he had passed a restless night. The dulness of the chest, sounds of the heart, tenderness at the scrobiculus cordis, and pain on deep respiration, remained as before. Respiration easy; tongue clean and moist; pulse 120, small, soft, and irregular, excepting that about every 60th beat, a little delay, not amounting to an intermission, was observable.

C. C. part. dolent. ad. ℥x. Rep. Pil. c. Hydr. Submur. gr. ij. Omitt. Mist.

On the 30th he could turn to either side without inconvenience, having found much more decided relief from the cupping than from the venesection; pulse 104, soft and fluid; skin natural; no mercurial action was evident on the gums; tongue slightly furred; impulse of heat, and dulness as formerly; no bruit is now heard at the scrobiculus cordis, but the natural sounds appear weak; below the left nipple was heard a harsh bruit de soufflet, or râpe, synchronous with, and following the systole of, the ventricles, and concealing the sound attending the disastole; above, and to the outer side of the left nipple, in addition to, and perfectly distant from, but still partially concealing this bruit, was a superficial rough rubbing, or grating noise, which was almost continuous, or at least had no regular and perfect intermissions.

Rep. Pil. 6tis horis, et Capiat Mist. si opus erit.

Oct. 1st.—Bruit softer, but more distinctly heard over a large space; pulse 96.

Rep. Pil. ter die Empl. Cantharid. regioni cordis; Capt. Haust. Efferv. 6tis horis.

3d.—The blister removed all remains of pain, but he now complained of some tenderness in the vicinity of the cæcum; no action of mercury upon the gums; sounds of the heart unaltered.

Pergat.

4th.—Fomentations had removed the abdominal tenderness; below the nipple was still heard a harsh bruit de soufflet, and above this point, and at its exterior the frottement still existed, but now consisted of three regularly successive sounds which may be thus represented—*tee te te—tee te te—tee te te;* tongue rather morbidly clean and smooth, not red; pulse 88, with the slight delay be-

fore observed occurring less frequently; there was still no mercurial action, as evinced by the salivary glans or gums.

Pergat.

5th.—The rubbing noise had entirely disappeared, but both above and below the nipple was now distinctly heard the bruit-de-soufflet synchronous with the systole, and running into and obscuring the second sound of the heart; pulse 96, slightly thrilling.

6th.—Alvine evaeuations green from mercury for the first time, but still no appearance of salivation; eomplains of some pain and tenderness in the right hypochondrium on turning or lying on the left side.

Pil. Hydrarg. gr. iv.; Opii, gr. ¾ ter die. Omitt. Mist. Appl. Hirudines vj. et Fotus, parti dolent.

8th.—I this day heard for the first time that he was not only troubled with piles, but had passed some blood after eaeh evaeuation for the last two or three days; bruit less harsh; he now again eomplained of some pain and slight swelling of the wrists.

Decoct. Cinchonæ 3ix.; Mucilag. Acaciæ, 3ij.; Syr. Papaver. 3j. ter die. Pulv. Ipecac. c. Opio. gr. x. om. nocte.

15th.—Pains removed entirely from wrists, but complains of some wandering uneasiness about the shoulders; bowels relaxed, and evaeuations still followed by a little blood occasionally. Bruit-de-soufflet mueh softer, and the second sound of the heart was now indistinctly heard over the cartilages of the third and fourth ribs.

Inf. Cuspariæ, ℥iss. Pulv. Cretæ c. ℈j. Liq. Opii Sed. ♏iij. ter die. Rep. Pulv.

17th.—Bowels regular, and little or no trace of blood existed in the exeretions. He slept well; pulse 96, soft, and feeble. He had no pain; respiration was easy; the dulness of the left side had of late mueh deereased; and over the portion of lung whieh afforded no indieation of the ingress of air, was now heard a muco-crepitating rattle, which either did not formerly exist, or was eoneealed by the abnormal sounds of the heart. A soft bruit-de-soufflet was now observable over the greater portion of the præeordial region, but below the left nipple it was still harsh and loud, approaehing to the bruit-de-râpe; and at the base of the sternum the natural double-flapping sounds of the heart were distinguished, still feeble, but pure. Over the cartilages of the third and fourth ribs it is now clearly audible, the second sound in its natural state.—Pergat.

19th.—Some uneasiness in shoulders; tongue and bowels in a healthy condition. Ordered again—

Decoct. Cinchon. c. Conf. Aromat. ℈j. ter die. Rep. Pulv. gr. v. om. nocte.

24th.—He continued free from pain; the shoulders were now quite easy; his appetite was good; his sleep natural; the dulness of the chest had almost disappeared; the pulse was 96, and feeble; and the sounds of the heart remained as at last report: believing them to arise from chronic affection of the valves, and probably to be beyond the reach of medicine, after giving many directions as to exercise, food, and clothing, I ceased regularly to visit him.

Remarks.—There are few, I imagine, who, after an attentive perusal of the preceding cases, will have any doubt as to the presence of pericarditis; though fortunately we had no opportunity of *absolutely proving* its existence. Yet none of the many distressing symptoms usually stated as characteristic of this disease, were here observable. The sense of burning and weight at the heart, and flushing of the left eheek, mentioned by Corvisart—the evident disparity between the foreible but irregular impulse of the heart and the pulse at the wrist, spoken of by Laennec—the increased dulness and projection of the præcordial region, considered of so much importance by Louis—were all absent; for the dulness observed in the second case was elearly referrible to the lung or pleura, and was probably the result of some former attack. There was here none of the anxiety and violent oppression; no dyspnœa, orthopnœa, or lividity of eountenance; no inability of motion from impending suffocation; no disposition to fainting, or actual syncope; no tumultuous action of the heart, or extreme feebleness, irregularity, or inequality of the pulse, often (and sometimes, indeed, truly) noted among the symptoms of perieardiris. But I am disposed to believe, that did the physician wait for the appearance of sueh indieations previously to suspecting the presence of pericarditis, or

acting on his suspicions by the adoption of a vigorous antiphlogistic treatment, his patient would, in a majority of cases, be beyond the reach of remedies, when, at length, tardily applied. The conclusions of Laennec upon this disease, appear amply confirmed by cases such as the above, and those less frequent but more distressing examples referred to. "Ces faits," says he, "et plusieurs autres me paraissent prouver que, dans quelques cas, la péricardite même aigue est une affection locale très-peu grave, et dont l'influence, non seulement sur le système général, mais même sur celui de la circulation, est presque nulle; tandisque, dans d'autres cas, la même affection, au même degré ou à un degré inferieur est accompagnée de fièvre aigue, et d'un trouble de presque toutes les fonctions, assez grave pour compromettre la vie du malade." This striking difference of symptoms and of termination, I am induced, from observation and reflection, to believe depends (as I have already stated in the essay mentioned above) upon the different character of the inflammatory effusion, which in the one case is for the most part solid and in comparatively small quantity, and in the other fluid and abundant. Experience clearly shows that rheumatic pericarditis is, and must be, generally of the former character, as daily observation proves that it has been and is continually overlooked; which would be impossible if attended with the grave symptoms which accompany serous or sero-purulent effusion into the pericardium. The existence of such affection has, indeed, often been not even suspected either by the medical attendant or the patient, till the heart being irrecoverably and permanently deranged, and the symptoms of chronic disease of the organ being too decided to be mistaken, the observant practitioner inquires the previous history of the sufferer, and finds that formerly (perhaps some years since) he has been affected with rheumatism; since which he has been more or less troubled with pain of the side or shoulder, dyspnœa, and palpitation; and to which, therefore, the disease is clearly to be referred. I am fully convinced that a great majority of the chronic diseases of the heart are originally produced by a rheumatic affection of the organ, or at least an inflammatory attack of the pericardium, while rheumatism is at the same time present in other parts of the body: and as thoroughly convinced am I, that few, very few, children and youths affected with rheumatism, escape this or some other inflammatory affection of the heart. Any one who chooses to inquire into the history and origin of the cases of heart disease presented to his notice, or to examine, by auscultation, the præcordial region of children suffering from rheumatism, submitted to his care, may speedily convince himself of the truth of these observations. Yet it is a lamentable fact that many practitioners, even of the present day, remain either ignorant or regardless of the *frequency* of such attacks, and that numbers of lives are perhaps, if not lost, at least considerably shortened by want of attention to their slightly obtrusive symptoms. I may here observe, that neither of these patients complained either of pain or tenderness, till after inquiry was made and pressure was used. Even then, they were so comparatively trifling that they might be not unnaturally attributed to rheumatism of the intercostals, or acidity of the stomach. Suspicions, however, of pericardiac mischief were excited by the nature of the cases, and the application of the stethoscope immediately changed suspicion into certainty; a characteristic rubbing noise was distinctly heard, which dispelled any remaining doubt, and at once clearly established the true nature of the disease, and proved the inestimable value of auscultation.

I have already stated it as my opinion, in opposition to that expressed by Dr. Stokes, that the *bruit-de-soufflet*, and *frottement* or *to-and-fro* sound, arise from different causes, and are produced in different parts of the heart. The circumstances observed in the cases, and particularly the second, related above, some of which were observed by other stethoscopists, as well as myself, are strongly confirmatory of this opinion. Thus in the progress of the case, the soufflet appeared deep-seated, the frottement comparatively superficial; the former was generally diffused over the heart, the latter confined to a small space; the former was evidently synchronous with the contraction of the ventricles, and regularly intermitted; the latter accompanied both contraction and dilatation, and though variable,

was continued; the one became more distant as the other gradually decreased; the one still remains, the other has entirely ceased. Dr. Watson, in his valuable clinical lectures on this subject, has stated his belief that the bruit de soufflet in these cases is dependent upon the inflammatory thickening of, or deposit upon, the valvular apparatus; that this bruit is seldom absent, and is often one of the first indications of mischief about the heart, and that it probably sometimes exists in rheumatic affections, without inflammation of the pericardium. With these opinions, my observation leads me perfectly to coincide; and in one particular alone do I differ from that gentleman. He appears to suppose that it is the *smooth* surface of the membrane covering the valves which is usually affected, and that the inflammatory deposit *upon* them, by diminishing the apertures through which the blood passes, is the cause of the sound; and he brings forward the granulation, or excrescences, occasionally met with upon the valves after death, as a proof of the correctness of his opinion.

Now (in England at least) it fortunately happens, I believe, that rheumatic pericarditis is rarely immediately fatal, however frequently it may shorten the period of life; and we, therefore, seldom have an opportunity of proving the coexistence of endocarditis in the first attack of the disease. We must therefore refer, for confirmation or refutation of this opinion, to the more chronic affections of the heart: we cannot have demonstrative proof, and must therefore, in a great measure, depend upon circumstantial evidence and analogy. These induce me to suppose that it is the tissue beneath the lining membrane, or the *attached* surface of that membrane itself, which is *usually* the seat of inflammation and effusion. This tissue is most constantly affected in diseases of the general vascular system; depositions in the coats of arteries almost always occur behind, and not upon the internal lining membrane; atheromatous, cartilaginous, and ossific deposits, are exceedingly common *beneath* the membrane covering the valves, the unattached surface of that membrane remaining smooth and polished, and are very frequent in chronic diseases of the heart, a very large number of which appear distinctly referrible to rheumatism, whereas the granulations or excrescences are, according to my experience, comparatively rare.

Seeing, then, that the bruit de soufflet usually appears early in the disease, continues throughout its progress, and often remains during life, at least upon slight exertion; that this bruit is now, I imagine, generally acknowledged to be dependent upon disease of the valves in chronic affections of the organ; that in these the deposit is beneath the membrane, and that they are frequently, perhaps generally, the result of inflammation accompanying rheumatism, it does appear to me natural to conclude, that the original inflammatory effusion or thickening occurs below, or on the attached surface of the membrane. It is true that the granulations, or excrescences, as they are *called* (I say called, for I believe they are not a *morbid growth*), *may possibly* become absorbed, and disease going on, and the bruit remaining unaltered, other matter may at the same time be deposited in a different portion of the affected valves: this is possible, but it appears not probable.

On the treatment of the former case I make no observations, as it was not under my own direction. On that of the second I have to state, that mercury, which I regard as our sheet-anchor in these cases, was given quite to the extent that I thought justifiable, particularly as, though the ordinary constitutional effects were not produced, after it had been regularly administered for many days, all the symptoms gradually decreased, and finally altogether disappeared, with the single exception of the bruit de soufflet, which I have every reason to believe was the result of some former attack. I was led to adopt this opinion not only by the previous history of the man, by his having before suffered from rheumatism, and, though he supposes on different occasions, from pain of the side, and from dyspnœa, and palpitation upon exertion, but by the decided dulness and slight contraction of the part said to have been before affected. It is, however, interesting to notice the decrease both of the harshness of the bruit, and of the dulness on percussion, over the diseased portion of lung into which the air now evidently passes, though with considerable difficulty.

The heart disease appeared so en-

tirely a local affection, that I did not, on the first day, think it necessary to abstract blood generally, especially as it has been observed by some, and I think also by myself, that topical often affords more decided relief than general bleeding. The lancet was, however, used on the second day, but simply as a precautionary measure; and the expressions of the patient certainly indicated that the benefit obtained by cupping was considerably greater than that afforded by the previous venesection. The above remarks on the relative advantage of local bleeding are, of course, intended to apply solely to the disease under consideration.

OPIUM IN INCIPIENT INFLAMMATION.

To the Editor of the Medical Gazette.

Sir,

I fear the crowded state of your journal can hardly afford space for the accompanying observations on opium; but should you find room for them, it may fix general attention on a subject which we have all too much neglected.

Your obedient servant,
Richard Burke, M.D.

3, Sackville Street,
Nov. 7, 1836.

For some time back my attention has been directed to the employment of opium and its preparations, as preventive remedies, in the early stages of irritation, with a hope of checking inflammation; but the few opportunities which private practice affords, of working out any theory, however simple, induce me to call the notice of the profession to it, through the medium of the Gazette. If I could succeed in fixing upon it the attention of our hospitals, where alone medicine can hope to make any advances to the nature of a fixed science, I shall, in some degree, have attained my object. The question is of paramount importance, and cannot rest where it is.

In the range of the materia medica, there is not a drug which has been so extensively used, under every form, and in almost every disease; one to which the system so readily accommodates itself; and yet scarcely one upon which there are so many contradictory opinions.

As the views which I here propose have reference to the employment of opium in irritation, so as to check the second stage, which is inflammation, it is of the last importance to have correct ideas of irritation. It has been variously defined by men of eminence, but differing little in substance. It is the exaltation of the organic action of a part, which is attended by inflammation when the irritation extends to the capillaries, and has been considered the primitive and principal form of the greatest number of diseases. In some it enters only as a secondary form, whilst there is another class, characterized by a sinking of all the powers of the system, into which it is supposed never to enter. The three elements which enter into the composition of irritation are, an exaltation of sensibility; an afflux of fluids to the capillaries of the part; a sojourn of those fluids there. In considering this question, our attention cannot be too closely directed to the following facts:—That without previous irritation there can be no inflammation, nor irritation without excitation, nor this last where sensibility does not exist. Irritation, when unaccompanied by inflammation, cannot be fairly called a morbid phenomenon. Broussais defines irritation "that state of an organ where excitation is carried to such a degree of intensity, that the equilibrium resulting from a balance of all the functions is broken." John Hunter says it is "a disposition to act without the power to act." But all these leave us still as much as ever in the dark as to the essence of irritation.

We can have but a confused idea of the influence which irritation exercises over the production of disease, without an accurate knowledge of the nervous system, to which at first it is limited, but which, when inflammation appears, extends to the vascular system.

The loose way in which medical men, until very lately, viewed the question of irritation, has most certainly led to serious errors. The simple, but comprehensive axiom, of *ubi stimulus, ibi fluxus*, was quoted only to be forgotten; and yet there are few to which we should more carefully attend. The first material character of inflammation is an

afflux of fluids to the interstices of the irritable fibre, but until this deposit take place disease is hardly imagined. It would, then, appear, that if this deposit were prevented, disease could not occur. It is generally laid down in books, that narcotics have the property of allaying irritation, if applied at a very early period, and that thus inflammation is checked.

For the theory of combating irritation, in its early stages, by exhibiting narcotics, we have the authority of Sir Everard Home, in the view which he takes of the influence of the nerves upon the action of the arteries, where he thinks inflammation depends upon the afflux of blood caused by the irritation of the nerves, and then concludes, that allaying the nerves is the best antiphlogistic.

There are two points which demand our serious consideration before we prescribe narcotics; if possible, to ascertain whether it be the ganglionic or cerebral system that is engaged. This is a point I fear not much attended to. If positive and manifest inflammation do not exist, then only do the majority of us prescribe narcotics. It is needless to say that this is not the only stage in which they may with safety be applied. In that restless agitation which sometimes succeeds fever, there is nothing to be compared with opium. Frank, no mean authority, tells us, "that when an intense pain, an excess of sensibility, a vivid affection of the mind, threatens an inflammation, a large dose of opium immediately after bleeding very often wards off the disease". Bleeding alone will not do, for we know that though we leave but one drop of blood in the body, that drop will, despite our bleedings, obey the summons of the irritating cause*.

At a meeting of the Royal Medical and Chirurgical Society, Dr. Yelloly, last year, made some very curious and interesting observations which bear directly on this subject. He does not think that vascular appearance from disease always necessarily denotes the existence of inflammation, and supported his views by producing a portion of the spinal marrow, which was highly vascular, but which was dependent, not on inflammation, but venous turgescence. From this we see that the mere fact of increased redness should not necessarily direct us to the lancet.

Upon the precise operation of opium we have much to learn: whether it act directly, by diminishing the secretions, or by rendering the membranes upon which the fluids are poured out, as in diarrhœa, insensible to their stimulating qualities, is still a question. One thing clear is, that it is with one or the other intent it is generally exhibited. If we find it useful in the case of inflamed membranes, where by checking the secretion it stops the first process of inflammation, it is not going too far to extend the same reasoning to muscular inflammation in its incipient state. Is it too much to say, that opium may act in another way than on the attributes of the solids—excitability, sensibility, contractility? Sir Gilbert Blane hints that it may act on fluids, from the property of life which the blood is supposed to possess, and illustrates his view by the well-known fact, that the healing process of many ulcers is retarded by the existence of morbid irritability and sensibility, and which being allayed by opium, the cure is completed by nature.

We look in vain to the works of the earlier writers on medicine for information on this head; the limited knowledge which they had of anatomy, and which led them to confound, under one common denomination, nerves, ligaments, aponeuroses, and blood-vessels, is at least some excuse. Until we come down to Sydenham, there is little of interest on this subject. That great man viewed it under three heads, to which he reduced the pathological phenomena which yield to its influence — severe pain, vomiting, and copious dejections. To allay pain is of itself of paramount importance, for it alone will often destroy life. The late Dr. Pemberton spoke from sad experience, when he said that pain was the greatest sedative in nature.

Looking at the various diseases in which opium is given, in one form or another, we must admit that there is something in the operation of this drug which we are as yet not thoroughly acquainted with. The ordinary diseases in which we see it given are inflammations, or injuries of such a nature, either

* Andral's Pathology.

from accident or design—as amputations, or sprain, which induce inflammation so rapidly as to leave no time for its exhibition as a preventive remedy. In such cases its exhibition is based upon empiricism, solely with a view to procure a temporary respite from pain. I am strongly disposed to believe that opium does a great deal more even in those cases; and if we could but shake off our little prejudices, which cramp our better judgment, opium, instead of being given as a placebo, which is unfortunately too often the case, would become a leading feature in the subjugation of positive disease.

Our attention has not been sufficiently directed to the consideration of abstract pain; it is, unhappily, too often viewed as a symptom, when it is really the disease itself. I am led to this conclusion by the operation of corrosive poisons, which, when taken into the stomach, often destroy life by their action on the nervous system, and which is marked by extreme pain, when, after death, we are unable often to discover any change of structure in any organ or tissue. May not the custom of the Arabian physicians, and which has its followers even amongst ourselves, of giving opium largely and successfully in intermittent, be accounted for in this way—that by rendering the system insensible to the stimulus of disease, it thus cures it? or is it that the nervous system, which opium is supposed by some to select for its operation, is the seat of intermittent fever? In this there is some probability, for we find it given by men of reputation, both in the hot and cold fit.

I have experienced in my own person the good effects of opium, if taken in the incipient stage, when catarrh threatened. Half an ounce of laudanum, in an ounce and a half of liquor ammoniæ acetatis, taken at bed-time, has frequently allayed incipient catarrhs; but danger is to be apprehended if we allow the first ten hours to elapse before we apply it, for the catarrh is then inflammation, which is sure to be aggravated by it. The part which opium plays in that very distressing disease, colica pictonum, is, I am inclined to think, to be ascribed to the power which it exercises in subduing irritation. A patient suffering from this complaint, took, in three days, 96 grains of opium and 6 oz. of the syrup of poppies, without feeling the slightest disagreeable sensation. At the expiration of three days, all pain ceased, and the bowels were easily moved by mild aperients. A very curious and ingenious theory has been offered, I forget by whom, to account for the part which opium plays in some thoracic diseases. It is supposed, that by shortening the respirations, less blood is admitted into the lungs, and consequently a diminished quantity of stimulating fluid reaches them: that under its employment the blood becomes less vivifying, no longer excites the arteries and tissues, whose life it was intended to maintain. This is not altogether visionary. Opium, we know, has some direct effect on the blood, though we are not yet prepared to say what that is. In cases of poisoning by it, the blood in the left ventricles of the heart is generally found black.

There are two remarkable cases in the Dictionary of Practical Medicine and Surgery, in the article "Apoplexy," by Cruveilhier, of the effects of opium in cerebritis. One, a woman with hemiplegia, 78 years of age, wh oexperienced in the upper paralyzed extremity, violent shocks, during which the hand struck the breast with great violence, producing the most painful contractions, and accompanied with loud screams. He tried opium internally, having found every other remedy useless, and the pains were instantly calmed. The other case is when the pain in the paralyzed limb was so severe that nothing but opium afforded the slightest relief. There is another interesting case recorded by Valisnieri. A jealous man administered to his concubine a large dose of cantharides, with the intent of destroying life. The stomach and intestines instantly became the seat of excruciating pain, accompanied by the most heart-rending cries, when, with the intent of giving her a *quietus*, the monster gave her two drachms of solid opium. The woman slept soundly for three days, at the expiration of which she woke, free from all pain.

Some of our standard works abound with illustrations of the value of this drug, even in acute diseases. Cullen and Lieutaud both assert that no medicine is to be compared with it in checking the paroxysm of pyrosis. Sydenham,

too, in his own aphoristic way, tells us that, *sine illo, manca et claudicet medicina.* Huxham and Sarcone gave it in pneumonia. Barras states that nine out ten of Broussais' gastro-enterites are best combated by it, as irritation, not inflammation, is the disease.

Much of the obscurity which shrouds the operation of this medicine, and the class of narcotics in general, is owing to the opposite and contradictory opinions advanced by writers on this subject, few, if any, of which, are the result of inductive reasoning. When allaying pain, we find them described as anodyne; sedative when checking the rapid flow of humours; and hypnotic when producing sleep. One class objects to opium in incipient inflammation, from a belief that it quickens the action of the heart and arteries; others as stoutly assert that it produces the opposite effect. Some, again, account for its effects by dividing its properties into two classes—stimulant, which acts first; and then sedative: whilst some of the French school assert that its action is neither sedative nor stimulant, but what they denominate—*perturbatrice.* Opinions like these are sufficient to shew that we have yet much to learn on this subject.

The dread of its poisonous properties has excluded its administration in many cases, where a free use of it would in all probability be attended with marked success. We have cases where 1500 grains were taken in seventeen days; and where twenty ounces of laudanum had been taken in twenty-four hours, without destroying life. The opium-eater took daily 8000 drops.

In the case of children I confess myself unable to offer a satisfactory explanation of its operation. We know that its exhibition has been attended with fatal results, in the case of infants, even in the small dose of three drops; so that in our present state of knowledge as regards the different preparations of opium, we must, in the case of infants and children, use it with the caution which their tender age and helpless condition demand.

CASE OF

FEIGNED PARTURITION;

WITH REMARKS ON THE PROOFS OF DELIVERY AND INFANTICIDE.

To the Editor of the Medical Gazette.

SIR,

IF the following cases, with remarks, seem to you sufficiently interesting, be pleased to give them a place in your excellent journal, and favour

Your obedient servant,

J. B. THOMSON.

Alva, Oct. 28, 1836.

Aug. 9th, 1836.—This day I was consulted by — —, to ascertain whether or not his wife, from whom he had lived apart for the last eight months, had given birth to a child, as was reported. The husband stated, that about fifteen months ago he married rather against his better judgment, but was driven to do so in consequence of his wife, the object of the present investigation, setting forth that she was with child by him. This proved to be an imposition. In about three months after marriage she again gave out that she was in the family way, took to her bed, shewed all the signs of a miscarriage, and actually imposed upon the surgeon who was then called to attend her. In consequence of these instances of duplicity, and divers malpractices, — — says he left his wife about eight months ago. This morning he is informed, on her own authority, that she bore a child at one o'clock A.M., which died in two hours after; and upon this fact he requires medical testimony. He not only doubts his wife's word, but says another reason for not believing in her having borne a child is, that he never knew her to be as other women are—*i. e.* having menstruation.

Without delay I called on Mrs. —. I found her a good-looking person, turned of 30 years of age, who, with clean cap, white bed-gown, and white sheet covering the bed-clothes, appeared as women are accustomed to do *en accouchement.* Her face had the ruddy hue of high tonic health, perhaps coloured with a degree of shame and confusion.

With some difficulty I persuaded her to submit to my inquiries, and answer a few plain questions, and insisted that, for the sake of allaying public clamour, it was quite necessary medical evidence should be had in her case. I remonstrated with her, shewing that if there was any truth in the report of her having borne a child, that she had exposed herself to judicial inquiry, since she had not called adequate assistance; and, moreover, I could satisfy myself by a short investigation whether her story was true or not. In fine, I recommended her at once to tell the truth, for her own sake and that of all concerned. By this time she allowed me to lay my hand upon her breasts and belly, &c. She now became alarmed, and confessed that there was no child born. She said that she had not any menstrual discharge for twelve months before; that she gradually enlarged in consequence, until she and all the neighbours believed her pregnant, and through the night she had a fearful discharge of blood, &c., with something substantial, which was thrown out by an attendant. I then pointed to a coffin for an infant lying on the table, and asked what was the use of this if her story was correct. The husband was now brought into the room, who said that a child, or something like one, had been laid out upon the table some time ago, but that his wife had taken it into bed with her, and concealed it among the clothes. He put his hand among the bed-clothes, and brought out a miserable imitation of a child, being a bundle of rags, with a stick or two to give the shape consistence! The object of all this *ruse* was to procure money from the husband.

The most important part of the foregoing case is the plausible story of the woman, that she *had not any menstrual discharge for twelve months before; that she gradually enlarged in consequence, and through the night she had a fearful discharge of blood, &c., with something substantial, which was thrown out by an attendant.* The confession afterwards, and the subsequent disappearance of the woman, hindered me from satisfying myself as to the truth of the foregoing story; but had she not confessed, and the statement proved true, there would surely have been very considerable difficulty in this investigation. Had it been true that the accumulation of menses for twelve months that morning appeared, and brought away something substantial, almost all the valid signs of delivery might have been present, and led astray the medical inquirer.

It is well known that the state of the abdomen after delivery may be simulated after it has been recently distended, by many causes, as hydatids, dropsy, atrophy, and, as was possible in the present case, accumulated menses. After such diseases we should find a loose and flaccid belly, a soft and full and tumid state of the vulva and external organs of generation, enlarged uterus, patulous os uteri, laceration of the fourchette or perineum, and even a discharge not easily distinguished from the lochia, independent altogether of delivery of a child. As to the mammæ and other appearances, they are often of a very delusive and unsatisfactory nature as proofs in a case of much moment.

From these observations we learn that few subjects demanding medical testimony are more involved in doubt and difficulty than inquiries into the proofs of delivery. Happily for the honour of the times in which we live, the spirit of attention and philosophic investigation has been especially directed to this important branch of judicial medicine. The ingenuity of our own profession, which has never been proverbial, and that of the law, which has always been so, have shed much additional light on such topics. The result has been, that what a few years ago was accounted most unequivocal evidence on some medico-legal cases, has of late been scouted at as matter of great uncertainty; and where not a grain of doubt was cast into the opposing scale, a weight of new facts has equipoised, or completely turned, the balance of justice on the side of the accused. Not less uncertain are the proofs of infanticide, with a remark or two on which subject I shall close this communication. The following cases lately came within my own knowledge.

Mrs. B. was suddenly taken with labour when sitting at the breakfast-table with the other members of the

family. She speedily arose from the table, and made for her bed; but before she could reach it, and before medical assistance arrived, a fine child was born. She was yet upon her feet, and the child being unattended to, fell upon the floor, and was taken up by the surgeon, when he arrived, quite dead.

Mrs. H., a worker in the Devon Colliery, while in the pit, and at a distance from help, was suddenly taken in labour, and bore a child alive; but it died before any one arrived to assist her.

Cases like these are by no means uncommon, and certainly ought to be kept in mind by medical men, when called on to give evidence in a case of suspected infanticide. With respect to *appearances of violence*, it behoves the examiner to exercise the strictest caution, both as to the facts detailed, and the inferences deduced therefrom. Injuries to the body, and crushing of the cranial bones, it is clear, could not be accounted satisfactory evidence that a child had been voluntarily destroyed, unless borne out by more important and collateral proof. Swellings of the soft parts, bruises, crushing of the bones, and even fracture, may occur in circumstances where the mother perhaps denies herself the assistance which would be desirable, or is suddenly taken in labour, and no aid can be rendered.

Strangulation has ever been held as a process most likely to be resorted to, and well suited to accomplish the destruction of an infant. But a suspicious case, attended by an unskilful person, lately came under my notice, where the child was strangled by the umbilical cord about the neck. Children are very often born with the umbilical cord about their neck, and therefore any evidence drawn from appearances of strangulation must be precarious and uncertain.

Perhaps the publication of these remarks may be useful, in shewing the uncertainty attending the proofs of delivery and infanticide.

[We should be glad to be favoured with the particulars of the case to which our correspondent alludes—"where the child was strangled by the umbilical cord about its neck." Instances of death produced in that way have been considered rare.—Ed. Gaz.]

OBSERVATIONS

ON THE

COMPARATIVE ANATOMY OF THE MUSCLES AND NERVES OF THE EYE-BALL,

AND ON THE THEORY OF THEIR FUNCTIONS, PROPOSED BY MESSRS. HUNT AND WALKER.

By John Thurnam, M.R.C.S.

In making a few observations upon the subjects embraced in the title of this paper, I would wish to observe, that it is to the explanation of the functions of the nerves and muscles of the eye-ball, given by Mr. Walker in a paper published by him in the Medical Gazette, for September the 24th, that I refer throughout. I think it, however, only fitting to place the name of Mr. Hunt, in conjunction with that of Mr. Walker, as, according to the admission of the latter gentleman, his theory is based upon an original suggestion of Mr. Hunt's.

The theory of the functions of the nerves and muscles of the eye given by Mr. Walker must, I think, be generally admitted by physiologists as, at the least, much nearer approximating to the truth, than any hitherto proposed. I have the greater pleasure in making this avowal, in consequence of having on a former occasion been opposed, and on that subject I still am, to the views of Mr. Walker*. In order, however, to the full establishment of any physiogical theory, it is not, I think it will be admitted, sufficient merely to prove that it is consonant with the anatomy of, and with the result of experiments upon, the organs concerned, in the healthy adult human subject. The physiologist ought in all cases to be prepared also to shew that his theories are all, at the least, repugnant neither to any facts observed in the gradual development and growth of such organs, from their earliest appearance in the embryo, to their attaining their full maturity in the adult form; nor yet to a consideration of the human organism in either an original or an accidental abnormal condition. Lastly, the theory should, *mutatis mutandis*, be likewise applicable to the explanation of the functions of the corresponding

* Medical Gazette, vol. xiii. p.p. 854, 971.

organs in the lower animals. It may, I believe, be safely affirmed, that physiology has been too long studied in reference to but one object of its domain—man; and that from this one-sided pursuit of the science, numerous false doctrines have been, and still continue to be, promulgated, which, under a more extensive view of the matter, would never have been propounded. In physiology, too long have we neglected the celebrated axiom of Bacon,—"Omnium gravissimus error in deviatione ab ultimo doctrinarum fine consistit."

It is in a portion of that spirit of investigation that I thus venture to recommend to others, that I am desirous of making the ensuing remarks upon the functions of the nerves and muscles of the eye-ball.

It is well known to comparative anatomists, that in addition to the six muscles of the eye-ball met with in man, there exists, in all mammiferous animals, with the exception of the quadrumana, another muscle, which arising from the bottom of the orbit around the optic foramen, passes forwards, surrounding the optic nerve, and is inserted into the sclerotic coat of the eye, a little behind the attachment of the tendons of the four straight muscles. This muscle varies in form and arrangement in different animals. In the ox, as in other of the Ruminantia, it forms a kind of muscular tube or funnel around the optic nerve, and after a short course, partially separates into two fasciculi, one of which, double the size of the other, is situated internally and superiorly; the other externally and inferiorly. These two fasciculi are inserted into a circular line on the sclerotic coat, about three lines behind the attachment of the recti. In the dog, again, as in the other Carnivora, the muscle has the same origin, but divides at an early part of its course into four fasciculi of equal size, which are connected with each other laterally, by a delicate aponeurosis, and are inserted into the sclerotic coat, at four equi-distant points, intermediate to, and a line or two behind the insertion of the four proper straight muscles of the eye. This muscle is met with in the turtle, and in most, if not in all, the Reptilia and Amphibia; it is absent in fishes, and in birds its place is occupied by the musculus quadratus of the nictitating membrane. It was familiarly known to the earlier anatomists, some of whom, as Vesalius, erroneously attributed it to man; and it is generally known under the name of the suspensorius or retractor oculi. It constitutes the "musculus septimus brutorum" of the English anatomist, Willis, and is the "muscle choanoïde" of Cuvier. Willis, in his work "De Anima Brutorum*," gives the following explanation of its function:—"Observare est quod quadrupedes, qui oculos in terram pronos, ac pendulos gerunt, musculum peculiarem habent, quo oculi globus suspenditur, et, ne pondere suo extra ossis orbitam dilabi aptus sit, sustentetur." This explanation of the function of the muscle is also adopted by other anatomists; but on the other hand, there are some who attribute to it, not so much of a general suspensory action as an occasional retracting one, and by the latter it is generally spoken of as the retractor muscle of the eye. I incline myself to believe that it is seldom called into active voluntary contraction in such a way as to produce a powerful retraction of the ball of the eye; an action in which I should suppose it to be only subsidiary to the four straight muscles of the eye. I shall hereafter assign a reason for this conclusion, viz. that the eye in quadrupeds is suspended by the ordinary and uniform degree of contraction of the seventh muscle.

Although the muscles of the eye appear to have been well examined by our modern comparative anatomists, yet it is to be regretted that the nerves supplying them should have been comparatively neglected; for I do not find that any modern author states the nerve which the suspensory muscle receives. It is, at the least, not named in the works of Cuvier, Blumenbach, Carus, Fyfe, or Grant. *A priori*, probably, it would have been expected that its nervous supply would have been derived from the common motor nerve of the eye, of the third pair. It is, however, supplied by a division of the abductor nerve of the sixth pair; and this would appear to be a universal fact, for I have found it to be thus in the Ruminantia (ox and sheep), the Solipeda (horse), Pachydermata (swine), and Carnivora (dog), amongst Mammalia. The distribution

* Cap. xv. p. 78.

of the sixth nerve to the suspensory muscle is, so far as I know, mentioned only by one modern author, and that is in relation to the Chelonian reptiles, by Bojanus, in his splendid monograph, "Anatome Testudinis Europœæ."

What is a singular circumstance in the anatomy of the sixth nerve in the Mammalia is, that although of the two muscles to which it is distributed, the suspensory is double the size of the abductor, yet that it gives a much larger proportion of its filaments to the latter. In the various eyes that I have dissected, I have uniformly noted that two-thirds, or even three-fourths of the filaments composing the sixth nerve, are given to the abductor, and only the remaining third or fourth to the suspensory muscle. This circumstance, I think, is sufficient strongly to support the view of the function of the latter muscle, which I have taken above.

When I first noticed this fact in comparative anatomy, I was not aware that there was any published account of it; and two years since, when I had the pleasure of attending Mr. Mayo's lectures on the anatomy and physiology of the nervous system, I took an opportunity of pointing it out to that gentleman as a fact apparently opposed to his explanation of the functions of the nerves and muscles of the orbit*. I have since found, however, that the comparative anatomy of the sixth nerve was well known 150 years ago to Willis, from whom I quote the following:—"Nervus iste (conjugationis sextæ) antrorsum tendens, prope oculi orbitam in duos ramos dividitur; quorum alter in musculum oculi abducentem, in exteriore ejus anguli situm, inseritur; atque alter in varias fibras diremptus, musculo septimo, brutis proprio, impenditur, adeo ut hic etiam nervus oculi motibus, fere tantum patheticis, aut ab instinctu naturali excitatis, inservire videatur†."

Willis likewise concludes, that the fourth pair of cerebral nerves, to which he gave the name of *pathetici*, as well as the sixth, are involuntary nerves; and that the voluntary motions of the eye are all performed by the muscles supplied from the third pair. He thus anticipated the views of Sir Charles Bell upon this question—views, however, which, like the theory of a respiratory system of nerves, of which they form a part, cannot, I think, be regarded as satisfactory, and to which there appear to be insuperable objections.

I would here submit, that before we ought to regard the theory of the functions of the nerves and muscles of the eye proposed by Mr. Walker as established, we ought to be able to show that it can be reconciled with the fact of the suspensory muscle in the lower animals being supplied by the sixth nerve. Mr. Walker will, I am sure, agree with me in considering it highly desirable to subject his theory to every test capable of being applied to it; and more especially when we recollect that with its adoption is necessarily connected the rejection of two theories on the same subject, propounded by such distinguished physiologists as Sir Charles Bell and Mr. Mayo—theories, however, which, it must be observed, cannot be regarded as having the same claim to attention that the one proposed by Mr. Walker has, inasmuch as they neither of them attempt to give a complete explanation of the nerves and muscles of the eye; the one of them, that of Sir Charles Bell, offering no explanation of the abductor muscle having a distinct nerve; and the other, that of Mr. Mayo, leaving the question of the superior oblique muscle, and the fourth nerve, equally in the dark.

In relation to one of the disputed points involved in this discussion, I may observe that in two dissections of the muscles of the eye of the ox and dog, made since the publication of Mr. Walker's paper, I have noticed that the insertion of the two oblique muscles is decidedly anterior to the vertical axis of the ball,—a fact confirming, I think satisfactorily, the view which Mr. Walker takes, in common with Meckel, Cloquet, and Knox, of the action of these muscles, in opposition to the reverse doctrine of Albinus, Bell, Mayo, Dalrymple, and others.

Although I have bestowed upon this subject considerable attention, and some reflection, yet I have not been able to perceive the necessity for any peculiar consent or sympathy between the suspensory and abductor muscles of the eye of quadrupeds. Mr. Walker, however, or some other physiologist, may perhaps be able to point out such a con-

* Vide Mayo's Physiology, second edition, p. 394.

† Nervorum Descriptio et Usus, cap. 22. p. 78.

nexion; and will probably be kind enough to answer the query with which I shall conclude these very cursory observations—*Is the fact of the suspensory muscle of the eye in the lower animals, being supplied by the sixth nerve, reconcilable or not with the explanation of the functions of the muscles and nerves of the eye ball, given by Mr. Walker?*

Westminster Hospital,
Nov. 2, 1836.

ON THE

OPERATIVE PROCEEDINGS

REQUIRED FOR

THE REMOVAL OF THE DISLOCATED LENS.

By Richard Middlemore,
Surgeon to the Birmingham Eye Infirmary.

In addressing to you some further observations on the operative measures required in certain varieties of dislocation of the crystalline lens, I shall offer no hackneyed apology for what may be considered the limited and very sectional character of my remarks, inasmuch as it appears to me that the *elaboration of the details* of medical and surgical subjects is one of the most legitimate and important objects contemplated by the establishment of medical journals; for in what other vehicle of information can the various objects of medical inquiry be investigated with equal minuteness? If the author of an ordinary octavo volume attempt this *elaboration of detail*, it is not difficult to predict how large a part of the projected matter of his work will remain unaccomplished. Regarding, therefore, medical journals as depositories of information the most ample and exact, and of inquiry the most elaborate and extended, I have, in my various communications to the Gazette, frequently selected, for investigation, a part of the section of a subject (if I may be permitted so to speak) which, if it has not instructed, has at least fatigued somewhat less than if a prolonged investigation of a large and comprehensive subject had been entered upon in the same manner in respect to all its parts. It appears to me that every practitioner should be encouraged to come forward, and deposit his stock of useful knowledge as he gradually acquires it (and who is there who can practise our profession without acquiring some portion of information worth communicating to others?) in a place which we have endeavoured to represent as being peculiarly adapted to its reception, so as to supply to the actively intelligent and devotedly industrious, an opportunity of aggregating the information comprised in the scattered labours of many writers, in a condensed and readily accessible form. In short, every man should feel it to be his duty to furnish some part of the materials, at least, of that rising fabric which the more diligent and enlightened will eventually fashion into a storehouse of professional knowledge — a temple of medical science, of a construction so perfect and beautiful that the finite faculties of man can scarcely further improve or adorn it. To approach even this typified perfection of knowledge, the active and constant exertions of all are required.

The practice of removing the lens, when displaced into the anterior chamber by accidental violence, or from other causes, has been long known, but not, until lately, so much acted upon as, I think, it ought to have been. Daniel mentions, that "M. Petit a pratiqué, en 1708, la section de la cornée pour extraire le crystallin qui était passé dans la chambre anteriéure *;" and Dr. Warren has furnished an elaborate and able article upon the subject †, in which he appears to consider that it is not only necessary to remove the displaced lens by an operation, when it has already produced acute inflammation of the eye, but that it is also justifiable to extract the lens immediately after it has become displaced, as a means of preventing the occurrence of severe inflammation. I do not, however, intend to point out the forms of dislocation which more especially require the performance of the operation, nor the period, after the occurrence of the displacement, at which it would be desirable to operate; for these things have been already fully discussed ‡. My chief object is to di-

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* Mémoires de l'Académie Royale de Chirurgie, tom. ii.

† London Med. and Physical Jour. vol. xxxvi.

‡ London Medical Gazette, vols. v. and ix. The North of England Medical and Surgical Journal, No, 4. Midland Reporter, vols. ii. and iii. Transactions of the Provincial Medical and Surgical Association, vols. ii. and iii.

rect attention to the mode in which the displaced crystalline should be removed, in those cases where from its constant or occasional residence in the anterior chamber, or in whatever situation it may be placed, such operation may be deemed requisite. If, then, it be necessary to extract the displaced crystalline through an incision of the cornea, should that incision be made at its upper or lower part? Before replying to this question, it is proper to inquire into the usual state of an eye in which a dislocation of the lens into the anterior chamber (for it is to this form of accident, or disease, that my remarks are more especially intended to refer) has recently occurred. We find that the eye is more or less inflamed—that its muscles, and those of the eye-lids, are irritable and spasmodic in their action—and that there is great intolerance of light. If an attempt be made to raise the upper eye-lid, the orbicularis muscle acts with great power; the surface of the eye is exposed with considerable difficulty, and the patient suffers extreme pain. Having, however, made a section of the upper part of the cornea, varying in size in correspondence with the magnitude and density of the lens, it is found to be amazingly difficult to introduce a hook for the purpose of removing the displaced crystalline: to introduce a hook through an opening at the upper part of the cornea, for the purpose of extracting a lens situated at the lower part of the anterior chamber, in an eye already much inflamed, is, I repeat, a matter very difficult of performance, and hazardous of execution. Skill and tact may accomplish it, but I entreat my professional brethren to witness the comparative ease with which a different mode of operating may be practised, before they resolve on making such extraordinary demands on their operative dexterity.

If the incision be made at the lower part of the cornea, and the knife be carried, as it ought to be, behind the solid (if soft, it will not require extracting) lens, it is then prevented from retiring behind the iris, and no efforts at removal are necessary; for the crystalline generally passes through the corneal opening without any trouble whatever.

The preceding method of operating has been recommended in my work *, and I should not so soon have referred to the subject again if I had not had a recent opportunity of observing the difficulties encountered by an excellent surgeon, in consequence of pursuing a different practice, and of ascertaining, by conversing with various professional friends, that they are prepared to give the influence of their recommendation to this, as I conceive, very mischievous and erroneous surgical practice: for it cannot escape observation, that the evils to be apprehended arise not so much from the mere section of the cornea as from the manipulations required, and the injury inflicted by the attempts to remove the lens.

* Vol. ii. p. 47.

NOTICE

OF A NEWLY-DISCOVERED

PECULIARITY IN THE STRUCTURE OF THE UTERINE DECIDUA, OR DECIDUA VERA.

By W. F. Montgomery, M.D.

Professor of Midwifery to the King and Queen's College of Physicians in Ireland*.

It would be an unprofitable occupation of the time of the Association to enter into any thing of a general or detailed account of the structure and relations of the decidua, which are so familiar to the profession. I shall, therefore, take for granted that my hearers are in full possession of the different points already well known on this subject, and confine myself exclusively to a brief notice of a peculiarity in the structure of this product, which, as far as I am aware, has never been described, although perhaps one of its most important and interesting features. About four years ago, while preparing the component parts of a human ovum, in the third month, for lecture, I observed that when the decidua vera was immersed in water, with its uterine surface uppermost, there appeared amongst the floating and shred-like processes which covered it, certain small circular openings, which at first I took to be merely foramina in the membrane; but on attempting to pass the point of a fine glass rod through one of them, I found it to be a cul-de-

* Read before the Medical Section of the British Association, at Bristol, Aug. 25, 1836.

sac. Being thus incited to ascertain how the matter really was, and examining carefully then, and having repeated the examination frequently since, I have fully satisfied myself and others who have examined the part with me, or to whom I have exhibited it in my lectures on embryology, both of the existence and peculiar character of the structure about to be described. There are on the external or uterine surface of the decidua vera a great number of small cup-like elevations, which project from it like little bags, the bottoms of which are attached to, or embedded in the substance of, the decidua: they then expand or belly out a little, and again grow smaller towards their outer or uterine end, which is, in by far the greater number of them, an open mouth, when separated from the uterus: how it may be while they are adherent, I cannot say. Their form is circular, or very nearly so; they vary in diameter from one-twelfth to one-sixth of an inch, and are elevated to about one-twelfth of an inch above the surface to which they adhere*: in the way of comparison, I would say that they were miniature representations of the suckers of the cuttle fish. They are not confined to any one part of the decidua, but are usually most numerous and most distinct in those parts of it which are not connected with the capillary rudiments of the placenta, and at the period of gestation which precedes the formation of the latter (the placenta) as a distinct organ: hence the best time for examining them is up to the third month. In the advanced periods of gestation they are not to be found; at least I have not seen them then. I am ready to confess at once, that I am not prepared to offer any decided opinion as to the precise nature or use of these decidual cotyledons, for to that name their form, as well as their situation, appear strictly to entitle them; but from having on more than one occasion observed within their cavity a milky or chylous fluid, I am disposed to consider them reservoirs for nutrient fluids, separated from the maternal blood, to be thence absorbed for the support and development of the ovum. This view appears strengthened when we consider, that at the early periods of gestation the ovum derives all its support by imbibition, through the connexion existing between the decidua and the villous processes covering the surface of the chorion.

* An accurate engraving of these decidual cotyledons will appear in a work on Pregnancy, now on the eve of publication.

CASE OF

POISONING WITH ARSENIC;

RECOVERY, AFTER HALF AN OUNCE HAD BEEN SWALLOWED.

By Dr. Jacob T. B. Skillman,
Of New Brunswick, N. J.

I was called to see Jane B., a native of this place, aged 22 years, at eight o'clock in the morning of the 27th of April, 1836. On my arrival, I was informed by her mother that she had taken sixpence worth of arsenic, or half an ounce, as I afterwards learned from the apothecary who sold it to the patient. Her mother handed me the papers in which it had been put up, and which showed very evident marks of having contained the poison, from the colour left upon the inside paper. She informed me her daughter had taken the whole dose the preceding evening, about twilight; that it soon produced emesis and catharsis, which continued frequent through the night. On examination, I found her pulse 140 in a minute, and irregular; she complained of much pain in her head, throat, and stomach; fauces appeared much swollen and red; eyes considerably inflamed; frequent sighing. Although somewhat reduced and exhausted by the action of the poison upon the stomach, I immediately took from her arm about twenty ounces of blood, which I thought had some effect in producing more regularity in her pulse, and would perhaps reduce the inflammation of the alimentary canal. I was also informed that her dejections appeared to contain a considerable quantity of the poison, in an undissolved state. I directed, after bleeding, an ounce of castor oil every third hour, and a wine glassful of a solution of Epsom salts in a quart of soapsuds, every intervening hour, until it should act freely upon the bowels; this last solution to be given lukewarm.

At six o'clock P.M. I found that she had rejected the most that she had

taken, and that the operation upon the bowels was very scanty; pulse more frequent; complained of more pain in the stomach. Ordered the medicine in smaller doses, and to be continued through the night until it should produce the desired action upon the bowels.

At eight A.M. on the 28th, her bowels had been freely acted upon by the medicine; stomach appeared less irritable; complained of more pain in the fauces, throat, and stomach. I prescribed leeches to the throat and stomach.

At six P.M., pulse more frequent, and an ash-coloured appearance of the centre of the tongue; edges much reddened by inflammation; complained of much pain throughout the system, with great and incessant itching of the skin; some tenesmus and strangury. Directed her to take a solution of tart. antim. and sp. nit., a tea-spoonful every hour, until the excitement abated; toast water and barley water for drink.

At 8 A.M., 29th, appeared somewhat relieved of all the unpleasant symptoms, and had eaten half a cracker. Directed a dose of salts, and a continuation of the solution of antimony.

At 6 P.M. salts had not operated: symptoms more aggravated. Directed a repetition of the salts, and a continuation of the antimony.

At 8 A.M., on the 30th, all the symptoms much more favourable; had eaten a cracker. Toast water and barley water continued for drink, and continuation of the antimony.

May 1st, at 8 A.M., symptoms the same as the previous day: had had a very restless night: drops began to act freely upon the bowels.

2d. At 8 A.M., has had a comfortable night compared with the former: tongue appears cleaning: has eaten some oyster soup.

3d. At 8 A.M., appears still more comfortable: sits up part of the day, and appears convalescent. She now complains only of debility and soreness of the tongue: her lower extremities appear somewhat œdematous, and her pulse is still frequent, but soft and elastic.

30th. She is now enjoying her usual health*.

* American Journal of Medical Sciences, for August 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Darstellungen und Ansichten zur Vergleichung der Medicin in Frankreich, England, und Deutschland. [A Comparative Sketch of Medicine in France, England, and Germany.] Von Dr. ADOLPH MUEHRY. Hannover, 1836. Schloss.

DR. MUEHRY's tour took place in 1835, and the notes made on the occasion have formed a very respectable pocket volume, which strangers from Germany will find useful as a guide. Correct maps of London and Paris are subjoined, having the chief localities interesting to the medical visitor conspicuously marked upon each. The account given of our hospitals is, generally speaking, correct, or at least there are no material errors in it, which, perhaps is as much as can be expected from a tourist making one or two flying visits.

Historisch-kritische Darstellung der Theorien über das Wesen und den Sitz der psychischen Krankheiten. [Account of the several Theories which prevail, respecting the Nature and Seat of Mental Diseases.] Von Dr. J. B. FRIEDREICH. Leipzig, 1836. Schloss.

This is an extremely interesting work, displaying all that erudition and practical experience through which Professor Friedreich has long since attained so distinguished a name. The subject is lucidly treated under the respective heads of the material, immaterial, and the mixed theories, with critical remarks on the principal supporters of each. The views of Jacobi and Combe are discussed; also those of Heinroth, Harper, Groos, and other authors of reputation: and on the whole, we have such an account presented to us of the actual state of medico-psychological literature, as we should be glad to see transferred into our own language. It would serve, we think, materially to promote in this country the study of a branch of medical science which has been but too much neglected — we mean that of mental diseases.

Dr. Gustav Blumröder über das Irreseyn, oder anthropologisch-psychiatrische Grundsätze [Dr. Blumröder on Insanity]. Leipzig, 1836. Schloss.

In this brochure, Dr. Blomroeder has attempted to treat the subject of insanity in a popular manner, or at least as well for the non-professional as the professional reader. He gives an account of the unity (*einheit*) of man, of the blood, the brain, and spinal marrow—of the two great faculties of the understanding and the will—of the various kinds of mental unsoundness, imbecility, melancholy, eccentricity, delirium, insanity; with views of the etiology, diagnosis, prognosis, the treatment and pathological anatomy of mania. The author's great resources of learned experience shine throughout; but how far his book would be popular here, even if it were translated into English, is questionable. It is dedicated to Professor Friedreich.

Analekten über Kinderkrankeiten. Heft. i.—viii. Stuttgart, 1834-6. Schloss.

This is a collection of papers on the diseases of children, which appears periodically, and is designed for the use of German practitioners. The contributors are of all countries; many of them French, American, and English.

Encyklopädie der gesammten Medicinischen und Chirurgischen Praxis. [Cyclopedia of Practical Medicine and Surgery]. Von Dr. G. F. Most, &c. Heft. i.—v. Leipzig, 1836. Schloss.

It is intended to complete this Encyclopedia in twelve *hefte*, forming two octavo volumes; and a valuable work it will be, if we may judge from the portion (nearly the half) which is before us. It abounds with information on the several topics which are treated, and the literature is rich to profusion. The arrangement is alphabetical.

Der Mensch nach den verschiedenen Seiten seiner Natur, oder Anthropologie, &c. [Man variously contemplated, &c.] Von Dr. K. F. Burdach. Stutgart, 1836. Schloss.

Professor Burdach here offers to the "educated portion of the community," a popular physiology, executed in a manner worthy of his distinguished abilities. It is to be completed in five parts, two of which have appeared—the first treating of organic, and the second of animal life.

Die Leistungen und Fortschritte der Medicin in Deutschland im Jahre 1834. [Progress of Medicine in Germany during the year 1834.] Von Dr. M. J. Bluff. Berlin.

We last year gave an account of the first two volumes of this work, and have been anxiously expecting the appearance of the continuation. The volume now published only brings us to the close of the year 1834; but every allowance must be made for the author of such an undertaking, when we consider that he not only gives us an account of all the new works, and new editions of works, brought out in Germany during the year, but a notice of all the articles published in the periodicals, arranged under their respective heads! The two indexes of names and subjects, which are added, render the work perfectly accessible in the way of reference.

Medical Study; an Introductory Address delivered at the Bristol Medical School. By J. A. Symonds, M.D.

We have perused this Address with much pleasure; it contains a great deal of valuable advice within a moderate compass, and displays the author's taste and good sense throughout. Some extracts we should be glad to transfer to our pages did our space permit; for only one can we find a corner. The author eloquently advocates the claim of our profession to be considered, as in this country it has long been, a learned one. He discourages, however, the mass of students from discursive literary pursuits, recommending in preference a concentration of their talents upon some well-defined object. "To the *many*," says Dr. Symonds, "I address myself; to those who with good average understandings wish to fit themselves for their future duties; and to such I would say: Beware of frittering upon a multitude of objects, talents which, prudently economized, may make you wise in your generation, and useful to many generations to come. Medical science is not what

it was in former times, nor is, indeed, any science. Look to any one of the physical sciences, and observe the division of labour. Take natural history: for one Cuvier, who commanded all its departments, what numbers you discern, distinguished indeed, but distinguished only in particular branches. How well, then, might we expect, *à priori*, that medicine must demand, from ordinary minds, an attention all but undivided. How much stronger also must this view become, by reflecting on the practical duties, cares, and distractions, which the application of medical science involves!"

MEDICAL GAZETTE.

Saturday, November 12, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

HOMŒOPATHY

SKETCHED IN ITS OWN COLOURS.

THE homœopaths say that they are not rightly understood,—that their doctrines are misrepresented,—and that they have not had a fair hearing. Poor innocents! We shall try whether we cannot aid them in becoming better known to the public. But lest we too should be subjected to the charge of mis-stating, we think it right to premise that we shall simply read a leaf out of their own book—make, in fact, a few selections from a prime production of the great Master himself—and offer a few plain comments, to impress their importance the more strongly on the minds of our readers.

Every body knows, or ought to know, that homœopathy abhors unpleasant doses of physic: that is to say, the homœopathic *doctors* never administer so much as a grain, for instance, of any medicine; they go to work with the millionth, or fraction of a millionth, of that quantity,—which no doubt is a potent recommendation of them to many people who hate the taste of drugs. But we apprehend that the world is not sufficiently aware of the miraculous effects of these invisible doses; which, indeed, seem to be the more wonder-working the more infinitessimal and spiritual they are rendered.

Let us take an example. The vulgar medical world—styled by the disciples of Hahnemann, *allopaths*—have long thought that there were many substances which, though still retained in our pharmacopœias, were inert, especially when exhibited internally. This the homœopaths have discovered to be a mistake. Charcoal, for example, which had often been tried medicinally, and given even to the extent of a pound in the day, without other effect than that of passing out of the body unaltered as it went in, has proved in the hands of the "revivers" of medicine to be a substance of most thaumaturgic qualities: the millionth of a grain of charcoal has given rise to astonishing symptoms.

In the Materia Medica of Hahnemann—even in the condensed French translation by Jourdan—no less than forty-six octavo pages are devoted to the detail of the symptoms produced by charcoal in doses not exceeding the millionth of a grain. *Seven hundred and twenty* is the number of symptoms ascribed to this dose of vegetable charcoal (carbo ligni), while *one hundred and ninety* are attributed to the same quantity of carbo animalis. In other words, the $\frac{1}{5,760,000,000}$ of a dose which has been found perfectly inert, is described as producing 720 symptoms!

But let us see what are those symptoms. Here are some specimens almost taken at random: and we pray the reader to keep steadily in his mind that the person or persons who have experienced these symptoms have taken the *maximum* dose of the millionth of a grain of *charcoal*—charcoal made of any kind of

wood; for Hahnemann says it is not material from what kind of wood it is made.

84. The face itches, particularly about the eyelids.

85. The inner angle of the *left* eye itches. *(Gersdorff.)*

86. A sensation of smarting itchiness, particularly in the external angle of the *right* eye. *(Idem.)*

87. Itching in the left eye; the part smarts after being rubbed, particularly at the inner angle.

88. A smarting in the inner angle of the left eye.

And so on for upwards of twenty more symptoms—all about the eye; or as some vulgar jesting allopath would say, "all my eye": but this specimen may serve.

The eye, however, it appears, is not the only part that itches when we take the millionth of a grain of charcoal.

324. Itching of the anus; the part gets hot after it is rubbed. *(Gersdorff.)*

325. In the morning, while in bed, the anus itches, and gets worse for scratching: heat of the part follows. *(Caspari.)*

326. Smarting of the anus. *(Gersdorff.)*

Oh, wonderful sympathy of MM. Caspari and Gersdorff! immortal pupils of the great Hahnemann! how will posterity admire the acuteness of your sensations, and the *extreme profundity* of your remarks!

Now for another set of symptoms. Enter Messrs. Gersdorff and Caspari again, having taken their millionth dose.

299. Windy colic: flatus circulating irregularly in the bowels, more particularly towards the left side and the back. *(Gersdorff.)*

300. Rumbling in the bowels, immediately. *(Idem.)*

307. After the rumbling, *émission de vents nombreux. (Idem).*

308. Rumbling in the lower bowels perceptible to the ear, *avec émission sourde de vents presque inodores, humides, et chaudes. (Idem.)*

309. Flatus rolling in the bowels, *et il en sort quelques unes qui sont sans odeur*, (in the course of half an hour.) *(Caspari.)*

But Gersdorff finds that in an hour and a half the case is altered: the nose begins to perceive as well as the ear.

312. *Vents, ayant un odeur putride.*

Yet once again—

310. On awaking in the morning, *énorme émission de vents sans odeur.*

For this last observation we are no doubt indebted to Hahnemann himself: there is a boldness in the *énorme* which gives it all the *air* of a master. With due deference, therefore, for so high an authority, presuming that we have to deal with the Doctor himself, we shall very humbly submit whether he and his pupils are quite sure that these formidable *émissions de vents* are altogether owing to the charcoal. Our hesitation to believe it simply arises from this, that the experimenters while on duty are allowed to eat French beans, green peas, and carrots. (Vide Organon, 118.)

Now to us it appears something like an infraction of the just laws of inference, to conclude, because a man is affected with flatus after a vegetable repast, that the said flatus is due, not to the peas and beans he has devoured, but to the millionth of a grain of charcoal which has been taken some hours before. Such, however, is the ingenious reasoning of the homœopaths. Admirable logicians!

The reader perhaps thinks that there is nothing else remarkable about charcoal: but this is not the case. We have still a few other symptoms to notice.

226. Repugnance to butter.

This wonderful property belongs to wood charcoal; but the animal sort is not less remarkable.

69. The appetite becomes destroyed *(se perd)* by eating!

Here is another symptom produced by animal charcoal—

114. Upon riding on horseback, the seat gets heated, and the part blisters.

In other words, the millionth of a grain of charcoal will cause a horseman speedily to "lose leather." But to proceed:

146. The right axilla itches.
159. A wart on the finger itches.
177. Lively dreams of scientific objects: dreaming of the discussion of literary works: talking aloud in sleep.

Innocent and happy homœopathists, if these were your only dreams! Take charcoal, ye Uwinses and ye Everests, and be happy! But stay; what do we see in another part, among the effects produced by this *potent* drug? Really our readers must translate for themselves.

374. Pollution qui ébranle fortement et douloureusement les nerfs: après quoi ardeur extrèmement violente à la partie antérieure de l'urètre, et en urinant une vive douleur secante avec ardeur, &c. *(Gersdorff.)*
375. Erection continuelle pendant la nuit, sans sensations ou idées voluptueuses. *(Idem.)*

376. Absence totale de l'appetit vénérien, le matin; *il ne peut même être excité par des idées lascives* (au bout de vingt-quatre heurs).—*Idem.*

Again; hear another worthy disciple:—

123. Pollution nocturne, pour la première fois depuis très long-temps, avec rêves voluptueux, sans érection; après le réveil, douleur spasmodique le long de l'uretre, surtout à sa partie postérieure.—(*Adam.*)

Now only conceive all this arising "pulveris exigui jactu:" "exigui" did we say?—the *millionth* of a grain, and that grain of *charcoal!* What wonder that sedate men, like the Gilchrists, the Everests, and the Uwinses, men such as Hahnemann himself would have chosen for conducting his experiments, should be captivated with homœopathy. The candour, the gravity, and the decency of the revelations above given are inimitable!

Be it always remembered, that these experiments for ascertaining the virtues of invisible doses are ordered to be conducted by such persons as we have described—men of sedate mind. Such is the precept of the great Founder. Hear the Organon:—

"The person who makes the experiment ought to avoid all fatiguing labour of mind and body, all excesses, debauches, or mental excitement, during the whole of the time that it continues. [Hear that, Master Gersdorff, you with the *idées lascives!*] No urgent business must prevent him making the necessary observations, and he must of his own accord be scrupulously attentive to every thing that passes in the interior of the body, without permitting anything to interrupt his care; and finally, he should unite with a healthy body (in its kind) a necessary degree of judgment, that he may be able to express and describe clearly all the sensations he experiences."

Granting that the experimenters are in this high and serene state of mind and body, who can fail to be struck with the effects produced by an atom of charcoal? Our difficulty, however, consists not only in conceding the postulate, but in allowing a particle of credit to the flatulent dreamers.

A word or two more concerning these experiments. It appears that the ladies are not allowed to be inactive disciples: we must have *their* experience too. But how this is gathered, we are not informed: whether the wives and sisters of the Gersdorffs, the Casparis, and the Adams, have been employed to observe the effects of invisible doses on their own persons, and have communicated their sensations to the father of the sect—or whether their husbands or brothers have interpreted for them, appeareth not: this only doth appear, that many odd symptoms are set down to the female experimenters. For example, dose $\frac{1}{1000000}$ gr. of charcoal:

377. Forte excoriation aux parties génitales de la femme, en avant, le soir.

378. Ardeur dans les parties génitales de la femme.

379. Douleur cuisante aux parties génitales de la femme, aver flux leucorrhoique abondant, pendant deux jours, &c.

386. Flux de mucus blanc par le vagin (au bout de quatre jours).

124. From a similar dose of animal charcoal, whites at the end of a fortnight; and

125. Leucorrheal discharge, staining the linen yellow, at the end of three weeks.

Why have we not the names of the illustrious ladies who made these revelations? why should they be cheated of their fair proportion of fame, having laboured so zealously to verify the old adage "ex carbone thesaurus?"

But enough, perhaps, of charcoal for the present. We doubt not we shall be "carbone notandi" by the Hahnemannians, for our pains. They cannot say, however, that we have misrepresented them. We have quoted their beastly descriptions given in the *ipsissima verba*, in which they express their pruriency, their flatulence, and their filth; and we have risked the displeasure of our readers by transferring so much egregious nonsense into our columns.

With reference to this last point, we can only urge in excuse, that our duty as public journalists seemed to demand that we should thoroughly expose the medical imposture of the day. We should have been spared the nauseous office, were it not for the late public circumstances which bestowed a certain degree of notoriety on the Hahnemannian delusion. It had fallen to its lowest ebb—that is to say, it was already in the embrace of certain pitiful pamphleteers, who were fast smothering it with their protection. Accident, however, or rather the mischievous bungling of one of the sect, brought the imposture again, for a moment, into notice: some of the sectaries attempted to profit by the occasion; so that they have only themselves to thank, if they now become better understood than ever. Their own foolish hands have served to tear off the veil of mystery, or obscurity, which gave them hitherto their only claim on the credulous. They pretend to want publicity and fair trial. They shall have both, if we can promise any thing within our powers of performance. And as we have shown up their impudent humbug in *charcoal* now, perhaps we may try them in *chalks*, or some other matter of that sort, on the next occasion.

COLLEGE OF SURGEONS.

By a recent regulation the Council of the College of Surgeons have determined not to receive in future the certificates of any lecturers in anatomy or surgery, who do not appear before them for examination with reference to their qualifications for teaching those branches.

BRITISH MEDICAL ASSOCIATION.

In our notice of the meeting which was recently held by the members of the British Medical Association, we expressed our regret that the card which they had the politeness to send us was not received in time for us to make use of it, so that we were compelled to take our report of the proceedings from the *Times*. The Editor of the Lancet, in the fulfilment of his dishonest calling, last week gave insertion to the letter of an anonymous slanderer, whose object was to produce the belief that our statement was false, and that the members of the Association regarded us with very different sentiments from those feelings of courtesy and fellowship which we had expressed towards them. Nothing, it seems, raises Mr. Wakley's bile so effectually as the idea of the General Practitioners presuming to think for themselves, and to judge of us by what appears in the pages of the Medical Ga-

ZETTE, rather than by *his* jealous and interested calumnies. Besides the communication which we subjoin, we have also to acknowledge the receipt of another, from an official quarter, in which anxiety is expressed to do away the impression which, it is feared, "the intemperate and unjust" letter alluded to, must have produced. We beg to assure the members of the Association that there is no risk of our connecting them with the maligners of the Lancet; and that this journal shall always be open to the furtherance of all measures calculated to advance the common honour and interests of our profession, from whatever quarter they may emanate.

To the Editor of the Medical Gazette.

SIR,

AT a meeting of the stewards held last night, I was directed to express to you their regret that the ticket for the late General Practitioners' Dinner did not reach you until too late to be used. This arose from the resolution desiring the attendance of reporters having only been made at so late a period as the Monday night preceding the dinner. On the whole of Tuesday I was very busy, and found it impossible to send to you, and to the Editor of the *Times*, the tickets placed at your disposal, until the evening of that day.

As the report of what occurred at the dinner, as copied by you from the *Times*, (although not incorrect), by no means does justice to our intentions, I forward to you, by the direction of the committee, a statement of the ends and objects of the British Medical Association, contained in a sketch of the plan upon which it is founded, and as read at the dinner by the chairman. Requesting that you will do us the favour to publish it in an early number of your valuable periodical,—I am, sir,

Your humble servant,

W. EALES, *Hon. Sec.*

Southwark, Nov. 2, 1836.

OBJECTS OF THE ASSOCIATION.

The following is a general sketch of the nature and objects of the British Medical Association:—

It is proposed, 1st, that the medical general practitioners of England and Wales shall form themselves into an Association, for the purposes of exciting and cherishing kindly and honourable feelings towards each other, and of guarding, watching over, and protecting the rights, privileges, interests, and respectability of the profession.

2dly. That the society shall be called "The British Medical Association."

3dly. That those gentlemen willing to become members, shall, at an early meeting, appoint proper officers: such as a President, Vice-Presidents, Secretaries, Councillors, Committees, &c., and shall form a code of laws for the government of the Association, to be submitted to the consideration of a subsequent general meeting.

4thly. That the Association shall hold frequent meetings for the transaction of business.

5thly. That it shall oppose all encroachments from without, and all dishonourable or unprofessional conduct among its members.

6thly. That it shall, by all legal means, or by application to parliament, if considered necessary, endeavour to remove all professional grievances, evils, and hardships.

7thly. That it shall protect its members from all illegal or unjust prosecutions.

8thly. That it shall endeavour to form a benevolent fund for the assistance of decayed members of the profession, and for the benefit of their widows and orphans.

9thly. That, to effect these important purposes, subscriptions shall be paid by the members, in such manner as shall be hereafter agreed upon, and donations requested from their friends and the profession at large.

10thly. That the Association shall endeavour to extend its expected advantages over the kingdom, by corresponding with, and inviting the co-operation of, their medical brethren in cities, towns, or local districts; and by recommending them to form themselves into societies, having the same or similar important ends and objects in view.

11th. That the members and their friends shall dine together at least once a year, in the metropolis; and that the Association shall, by all means in its power, endeavour to promote the welfare, prosperity, and union of its own body in particular, and uphold the dignity, respectability, and usefulness of the whole medical profession.

P.S.—Since writing the foregoing, it has occurred to me that it would be as well to send you an extract which was read at the dinner by the chairman, from the Address prefixed to the laws of the Southwark General Medical Practitioners' Society. As the members of that society have been principally instrumental in establishing the present Association, the following extract will tend further to elucidate their views, and to show that these

are not opinions arising out of any improper motives, or taken up to serve a purpose at the present moment merely; but that they are the deliberate opinions of honourable men:—

"It is not the object of this Society to institute or encourage a monopoly. It is intended to promote fair and honourable conduct among the practitioners at large towards each other—to encourage among them the exercise of harmony and good will—to diffuse useful medical information—to insist upon the rights and privileges vested in the members by the law of the land—to suppress illegal practitioners, and thereby protect the real interests of the public—to require the due observance of medical etiquette between the physician and consulting surgeon, and the general practitioner—in few words, to render the profession within the sphere prescribed honourable, useful, and respectable."

These were the only objects of the gentlemen forming the before-mentioned society; and although, from the apathy of general practitioners, it was never supported as it should have been, it has gone on until the present time; henceforward it will be lost in the British Medical Association: and if this be supported, as present appearances warrant us in assuming it will be, and, I may be permitted to add, as it deserves to be, by the profession, it will confer upon all its members incalculable advantages, and prove ultimately of essential benefit to the public.

LECTURES

ON

LOCAL HYSTERICAL AFFECTIONS,

Delivered in the Medical Theatre of St. George's Hospital,

By Sir B. C. Brodie, Bart. F.R.S.

Lecture II.

Hysterical Retention of Urine — Aphonia — Affections of the Breast—Tetanus—Singular Affection of Hand—Sneezing, &c.

Those which I described in the last lecture are only a part of the local hysterical affections which fall under the observation of the surgeon, and an acquaintance with which is necessary, to enable him to practise his art with credit to himself, and advantage to the public.

Hysterical retention of urine is of such frequent occurrence, that any particular description of it would seem to be superfluous. An observation, which has been already made, is equally applicable to this as to other forms of hysterical paralysis. The muscles are not incapable of obeying the act of volition, but the volition itself is not exercised. So it is, at least, in the first instance: but if the patient has allowed the bladder to remain for a great length of time in a state of extreme distention, actual paralysis may ensue, and she may then strive in vain to empty the bladder, without the aid of the catheter. In these, and in other cases in which the bladder has been long extremely distended, the mucous membrane becomes affected with chronic inflammation, secreting the usual adhesive mucus; and even worse consequences may ensue than these. In a case, to which I have had occasion to refer in my lectures on the diseases of the Urinary Organs, hysterical retention of urine having been for a long time neglected, at last forty ounces of urine were drawn off by the catheter. In the *post-mortem* examination, the bladder was found of a very large size, of a dark and almost black colour: there were only slight vestiges of its natural structure left, the muscular fibres being very much wasted, and the internal membrane presenting the appearance of a very thin film, which was readily separated from the parts below. The dark colour of the bladder did not seem to arise from mortification, there being no fœtor, nor, with the exception of the black colour, any indication of it.

Females who labour under hysterical retention of urine, if left to themselves, usually recover in the course of a short space of time; sometimes almost suddenly: but if the catheter be employed, their recovery may be protracted for an indefinite period. We may lay it down as a general rule, that in these cases the catheter should not be had recourse to: and the only exceptions to it are in those extreme cases in which actual paralysis has taken place, and the bladder is likely to become diseased, if not artificially relieved.

Hysterical *aphonia*, or loss of voice, allowance being made for the different functions of the affected parts, corresponds very nearly to the hysterical retention of urine. It takes place suddenly, continues often for many months, even for one or two years; and then disappears as suddenly as it began. A patient thus affected may, when under the influence of strong moral excitement, find herself speaking in her natural voice, when, for some time before, she had spoken only in a whisper. Her recovery may be permanent, or she may relapse into her former condition.

This symptom is not unfrequently met with in the male sex, especially in those of the clerical profession, probably because they often lead very sedentary lives, and also because in their profession they are called upon to speak in public in a tone raised above the ordinary standard.

A tympanitic distention of the intestines is not an uncommon symptom in young women who are affected with hysteria; and, when existing to a great extent, is frequently mistaken for ovarian dropsy. The majority of cases in which the patient has been supposed to be cured of ovarian dropsy, by the ageney of iodine and other remedies, have been, I doubt not, of this description. Yet the diagnosis is not difficult. The absence of fluid is distinguished by the absence of fluctuation; and the sound produced by percussion sufficiently indicates the cause of the distention. When the tumor is of a large size, there is pain in the abdomen, and the respiration is rendered difficult in consequence of the impediment which exists to the descent of the diaphragm. If the uneasiness be such as to induee the practitioner to direct the use of the warm bath, and the tympanitic distention be great, the effect is remarkable. Instead of sinking in the bath, as under ordinary cirenmstances, the patient floats on the surface. If an elastic gum tube be cautiously introdueed, so as to reach the upper part of the rectum, and pressure be made on the surface of the abdomen, the air may, in some instances, be made to escape through the tube, until the abdomen is reduced almost to its natural dimensions: but it becomes reaccumulated in the course of a few hours. A stimulating injection, made with the *confectio rutæ*, will sometimes produce the same result.

Young women are subject to an affection of the breast, corresponding to the hysterieal affections of the joints, and indicated by very similar symptoms. These cases have been noticed by Sir A. Cooper, in his observations on the Diseases of the Breast. The patient complains of pain in the breast, and shrinks on pressure being made with the fingers, or even on the skin being slightly pinched. Not unfrequently the examination of the part produces twitches and motions of the body, bearing no small resemblance to those of chorea; yet if it can be dexterously managed, while the examination is being made, that the patient's attention should be otherwise engaged, not only these motions do not occur, but she may seem scarcely sensible of pain. The morbid sensibility is not confined to the breast, but extends to the axilla, and down the arm. No distinct tumor is perceptible in the breast, but when the disease has been of long continuance, the whole organ becomes slightly enlarged, probably in consequence of an increased determination of blood to the small vessels; yet there is no redness of the skin, and indeed the skin is even paler than natural, with a somewhat glossy appearance of its surface.

These cases are to be distinguished from those of a rare kind of irritable tumor of the breast, of which a representation is to be found among the plates annexed to Sir Astley Cooper's work. I conceive that they ought also to be distinguished from those which may occur at any time of life, and in women who have no particular disposition to hysteria. In the cases to which I now allude, the pain and tenderness are much less than in the true hysterical affection of the breast, and it will be almost invariably found that the patient has witnessed the miseries of some friend or acquaintanee who has suffered from carcinoma. No part of the body will bear that rigid scrutiny to which the breast is subjected under these circumstances. Close attention will discover in any, even in the most healthy organ, sensations which had been previously overlooked; and constant anxiety on the subject may magnify such sensations into pain. In these last-mentioned cases a strong assurance that no disease exists will make the patient happy, and remove the pain; but no such assurance will be adequate to the cure of a genuine hysterical affection.

Hysterical tympanitis is always attended with a more or less constipated state of the bowels. But obstinate constipation of the bowels is a frequent occurrence in hysterical patients, independently of any considerable degree of tympanitis; and I have known many instances in which a case of this kind has been mistaken for one of stricture in the upper part of the rectum. The surgeon here sometimes misleads himself by taking it for granted that a very long bougie may be introduced into the rectum, if there be no actual contraction; not recollecting that the naturally tortuous course of the bowel is often sufficient to prevent a bougie being passed more than a few inches, even in a healthy rectum. But the statement of the patient tends to mislead him also; for she describes herself as going to the water-closet, and yet being unable to eject the contents of the bowels. I will not say that it is so in all cases, but I am satisfied that, in some instances, if you cross-examine the patient, you will find reason to believe that the hysterical constipation of the bowels is of the same nature with the hysterical retention of urine. The effort of volition is not exercised except when the accumulation of fæces has become excessive. Hysterical

difficulty of deglutition, which is sometimes mistaken for stricture of the œsophagus, is probably an affection of the same kind; there being no actual spasm, but a defective action of the voluntary muscles, by means of which deglutition is performed.

Symptoms resembling those of tetanus occasionally occur in patients who are under the influence of hysteria; sometimes assuming the form of trismus, at other times that of *opisthotonos*. A case of *locked jaw*, cured by the injection of oil of turpentine into the rectum, and published by Dr. Phillips (then residing at Andover), in the sixth volume of the Medico-Chirurgical Transactions, is manifestly one of this description.

In a great number of instances, local hysterical symptoms appear to be connected with some accidental injury—generally a very slight one; and they are then especially liable to be misunderstood, and mistaken for something very different from what they really are.

For example: a woman is bled in the arm. She complains, perhaps, of severe pain at the time; but this subsides, and the wound heals, as under ordinary circumstances. Then she complains of pain again, extending down the forearm to the hand, up the arm to the axilla and shoulder, and even to the side of the neck, and sometimes down the side of the chest also: the extent and degree of pain varying in different cases. You examine the cicatrix, but can discover nothing unusual in it; but the patient flinches when it is touched. She very commonly complains of the surgeon, saying that she was badly bled, or bled with a blunt lancet, or a foul lancet, or that a nerve was pricked which ought not to have been touched; while the real origin of her symptoms may be traced to the peculiar state of her own nervous system. If you investigate the case further, you will always find that she has been liable to various nervous symptoms previous to those which are attributed to her being bled; and when these last disappear, nervous symptoms of some other kind show themselves.

In another case, the patient has received a blow on the head. In order to avert the consequences which such an injury may be expected to produce, she is bled repeatedly, takes aperient medicines, and is kept on a low diet. When her physical powers are thus reduced, she complains of pain in the head even more than she did in the first instance: but the pain is of a different character, and is usually attended with other symptoms, such as do not belong to inflammation. Thus she has a sense of dizziness, or feeling as if water was trickling over her head. Then the countenance is blanched, the skin is cool, and the pulse is probably small and quick, and weak. If, under these circumstances, the surgeon, mistaking the nature of the case, continues to abstract blood, and to keep the patient on a low diet, all these symptoms become aggravated; other symptoms of a more decidedly hysterical character show themselves, and no improvement takes place until a more judicious treatment is adopted. In another case, which is of no unfrequent occurrence, a young woman pricks her finger, or perhaps the finger is merely pinched. Soon afterwards, she complains of pain extending from the finger upwards, along the hand and fore arm. This probably is followed by a convulsive action of the muscles of the arm, or by a continued contraction of the flexor muscles on the anterior part of the arm, so that the forearm is kept permanently bent; at least while the patient is awake, for the spasm is generally relaxed during sleep.

But the symptoms which, in hysterical patients, are attributed to a local injury, often proceed much further than what I have hitherto described. For example:—

A young lady, eleven or twelve years of age, pricked the fore-finger of her left hand with the point of a pair of scissars. This was immediately followed by pain in the course of the median nerve, and on the following day the fore-arm was fixed by muscular contraction, at a right angle with the arm. After a few days, all the muscles of the hand and fore-arm were affected with violent spasms, producing strange convulsive movements of the hand and fore-arm. These were attended with sickness and vomiting, so that for two days, whatever was received into the stomach was immediately rejected from it. By degrees the other limbs became affected in the same manner, and it was impossible for the patient to walk, or even to stand. Sometimes the diaphragm was affected so as almost to threaten suffocation. At other times the jaw was closed by a contraction of the masseter muscle, or she lay in a state of opisthotonos. Occasionally there was a violent pain in the head, which was described as having the same character as that of the finger which had been pricked; and these symptoms continued (sometimes one order of them, sometimes another, being predominant) until recovery took place under the circumstances which I shall have occasion to notice hereafter.

With a view to the further illustration of this part of the subject, I shall mention another case. A female about 30 years of age was admitted into St George's Hospital, on account of a simple fracture of both bones of the fore-arm. There was

nothing unusual in the fracture, but she complained of an extreme degree of pain in the injured part. By degrees the pain extended up the arm to the axilla; then to the same side of the neck and head. The smallest motion of the limb, even the lifting the fore-arm off the pillow on which it lay, occasioned violent pain, and convulsive agitation of the limb, which were soon followed by what might be termed a state of hysterical syncope, in which the patient lay apparently insensible to external impressions for several minutes. The fracture united as under ordinary circumstances; but the nervous symptoms continued for many weeks, then subsiding gradually. It is worthy of notice (and this circumstance confirms the opinion, that symptoms of this kind belong more to the constitution than to the actual injury), that about two years before the occurrence of this last accident, this individual had met with a slight injury of the ankle, for which she was attended by Mr. Fuller, of Piccadilly; and that a train of nervous symptoms at that time supervened, nearly similar to those with which she was afterwards affected in the hospital. It is also worthy of notice, that on both occasions she had occasionally a spitting of blood, probably furnished by the mucous membrane of the pharynx or trachea, as there was no reason either at the time, or afterwards, to suspect the existence of disease in the lungs.

I have seen several cases of a singular affection of the hand and wrist, which manifestly belongs to the class of cases of which we are now treating. It occurs in females who have a disposition to hysteria, especially in those who have suffered from mental anxiety and over-exertion, and is usually, but not constantly, referred to a sprain, or some other slight accident. The patient complains of pain in the back of the hand and wrist, trifling at first, but gradually becoming more severe. In many instances, after some time has elapsed, there is a diffused swelling of the soft parts, extending a short distance up the lower extremity of the fore-arm; and downwards as low as the fingers. This swelling is not attended with redness of the skin; and having lasted for a few weeks, it subsides, while the pain remains, constant in its character, aggravated by every motion of the limb, and always more severe in proportion as the patient's attention is in a greater degree directed to it. To prevent the motion, which she so much dreads, the patient keeps her hand in one position, and the consequence is that the joints become comparatively stiff, the hand at the same time having a very characteristic appearance, the skin being smooth and shining, and appearing to adhere more closely than is usual to the parts beneath. This state of things may continue for three months, for six months, or even for one or two years; the symptoms then gradually subsiding, without leading to any further ill consequences. The result, however, is not always so fortunate. I attended a lady who laboured under the symptoms which I have just described, with the late Dr. Luke. She left London on a visit to the continent, without any amendment having taken place. I saw her again after the lapse of four or five years: the muscles of the fore-arm were at this time wasted and paralytic; the whole hand was shrivelled and useless; the fingers permanently contracted towards the palm of the hand; the nails thin and scabrous.

I shall conclude the present lecture by a brief notice of some cases, which will serve to illustrate further the variety of singular local symptoms which may arise as a consequence of hysteria, and which may fall under your observation as practitioners in surgery.

I was consulted concerning a young lady, 18 years of age, under the following circumstances. She was liable to fits of incessant sneezing, attended with a most abundant flow of watery fluid from the nostrils. This sometimes alternated with a nervous cough; while at other times she suffered from that sensation in the throat which is usually described under the name of *globus hystericus*. Not unfrequently she was affected with ordinary paroxysms of hysteria. She had a feeble circulation, and cold hands and feet, and her menstruation was irregular and deficient; in other respects she was in good health. There was no evident disease in the nostrils.

A married lady, 37 years of age, was affected with similar fits of sneezing, attended also with a copious watery discharge from the nostrils. These symptoms attacked her once in a week, and in each of these attacks she sneezed not less than one hundred times; the watery fluid droping from the nostrils so as to wet a pocket-handkerchief completely through. About the same time she began to experience a disagreeable sensation in the face and palate, not amounting to pain, but which she described to be such as might be produced by a worm creeping in her flesh. These latter symptoms gradually became more distressing, while the fits of sneezing became less frequent. At the time of my being consulted, three years after the

commencement of the disease, the fits of sneezing did not occur oftener than once in a month, but she complained of an aching pain, with a sense of pulsation, in the roof of the mouth, the teeth, and tongue, occurring chiefly during the night, and being then very severe. There were no perceptible marks either of inflammation, or of other disease, in the parts to which the pain was referred.

An unmarried lady, 32 years of age, consulted me on account of her being liable to some very distressing paroxysms, in which she experienced a difficulty of respiration, attended with a sense of constriction of the chest, and great general excitement and agitation. These paroxysms often continued for ten or fifteen minutes, recurring at irregular intervals; sometimes without any evident cause; while at other times they might be traced to some sudden emotion of the mind. So far the case did not differ from many other cases of hysteria; but the peculiarity of it, and the circumstance which led to my being consulted, was as follows:—There was a particular spot, near the ensiform cartilage, which she believed to be in some way or another connected with her complaint. Nothing could be discovered in this part different from what is usual, by the most strict examination; but the pressure of the finger on it never failed to induce one of the paroxysms which I have just described. When these paroxysms were most severe, they were always attended with an abundant flow of limpid urine. These symptoms had existed in a greater or less degree for ten or twelve years, and had supervened on a state of exhaustion occasioned by an attack of typhus fever.

A young married lady, who was liable to ordinary attacks of hysteria, complained of a tender spot on the anterior part of the abdomen, a little below the ensiform cartilage. The slightest pressure of the finger on it caused excessive pain, and was followed by violent agitation of the whole person, bearing a more near resemblance to the convulsive motions of *chorea* than to any thing else, and continuing for several minutes.

AN ILLYRIAN DWARF.

There is at present in Paris a dwarf aged 22 years, and not three feet high. His name is Matthias Gulia. He was born in Illyria, not far from Trieste, of parents of good size and shape. Gulia exhibited nothing anomalous in his formation till he was five years of age, when he ceased to grow. He is distinguished from individuals of his own height by his cultivated mind, and his excellent proportions. He speaks five languages—the Croatian, Illyrian, German, French, and Italian. He is, moreover, accomplished: plays the violin very well, is fond of being on horseback, and is a good sportsman.—*Journal Hebdomadaire.*

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Mr. Earle, the President of the Society, in the Chair.

The first meeting of the society this season was held on the 8th of November, at half-past eight o'clock p.m., in the Society's house, 53, Berners-street, Oxford-street.

A considerable number of the Fellows, as well as many visitors, attended, and numerous presents of books were announced to the meeting.

The first part of a paper was read, entitled,

"*Necrosis; being an Experimental Inquiry into the Agency ascribed to the Absorbents in the removal of the Sequestrum,*" by George Gulliver, Esq., Assistant-Surgeon to the Forces.

It was communicated by Sir James Macgrigor, Bart.

The object of this paper was to determine what becomes of the dead bone in necrosis, and by what means it is replaced. The first part of the paper only was communicated to the society, and this was confined to the question—"whether dead bone admits of removal by absorption;"—the consideration of the other means by which it may be discharged was reserved for a future communication.

The opinions of the author, derived from preparations contained in the museums of anatomy and pathology, from cases, and from experiments, went to show that the absorbents have no power in removing dead bone; and that the facts which have been brought forward in support of a contrary opinion may be otherwise accounted for. These facts were shortly enumerated in the paper as—1st, the gradual disappearance of the sequestrum in many cases of alleged necrosis; 2d, the irregular and eroded state of the dead portion; 3d, the contact of granulations with the indentations on its surface; 4th, the absorption of the fang of a transplanted tooth; and, 5th,

that portions of dead bone have diminished in weight after having been kept in contact with the granulations of an ulcer.

The author, in taking a review of these facts, asserts, with respect to the alleged disappearance of the sequestrum, that some cases have been described as necrosis which in reality have been thickened bones, the result of long-continued inflammation, in some of which small fragments of dead bone have been detached from their interior; that the deposition of new bone around the old is not an absolute proof of the death of the latter; and that he has observed several cases in which pieces of dead bone have remained for months in contact with living parts, unaltered in form, size, and weight. The worm-eaten appearance on the surface of many sequestra, he refers to the death and separation of the bone, and rather attributes to the effect of the ulcerative process while the part retained its vitality, than to the action of the absorbents after its death.

The aspect and situation of the granulations with respect to the sequestrum he believes to depend in some cases upon the extension of the ossific process into them, and in others upon the work of exfoliation. The disappearance of the fang of a transplanted tooth seems, in the author's opinion, to indicate that it preserved its vitality, and that accordingly it became subject to the laws of the living body of which it formed a part.

Mr. Gulliver relates, in his communication, five cases and no less than sixteen experiments to show that dead bone, when laid in contact with ulcers—when buried in the soft parts of the body—or when placed either on the surface or in the interior of living bone—undergoes no change in size, weight, or appearance. In conclusion, the author repeats his belief that the absorbents are not the means by which a portion of dead bone, or the sequestrum in cases of necrosis, is removed.

Ligature of the External Iliac Artery.

The next communication read to the society was the sequel of a case, related at page 95, in the 10th volume of the Med. and Chir. Trans., in which the external iliac artery was tied by George Norman, Esq. of Bath. The subject of this history died twenty years after the operation, having continued free from aneurismal disease up to the period of his death. The limb was injected from the lower part of the aorta, and the wax ran freely even into the minute vessels of the foot. It was found on dissection that the external iliac artery was obliterated from its origin to a little above the point where the epigastric and circumflexa ilii arteries are given off. A mass of fibro-cellular substance occupied the situation of the common origin of the profunda and external circumflex arteries, which, though obliterated, could be distinctly traced to the femoral, which was pervious in its whole extent. The collateral circulation had obviously been carried on by the ramifications of the internal iliac, as follows:—

1. The ilio-lumbar anastomosing with the circumflexa ilii and the external circumflex.
2. The obturator with the epigastric and internal circumflex.
3. The gluteal with the external circumflex.
4. The ischiatic with the perforating branches of the profunda.
5. The internal pudendal with branches of the internal circumflex.

All these arteries were larger than natural.

At the close of the meeting, the President announced that in future no papers could be published in the volumes of the Transactions, unless they had been previously read before a meeting of the society.

At the next meeting, a paper will be read on "Atrophy of Bone," by Mr. B. Curling.

PROCEEDINGS IN CAMBERWELL.

POOR LAW MEDICAL CLUB.

To the Editor of the Medical Gazette.

"And shall we own such judgment? no; as soon
Seek roses in December, ice in June,
Hope constancy in wind, or corn in chaff,
Believe a woman, or an epitaph,
Or any other thing that's false, before
You trust in critics, who themselves are sore."

SIR,

PASSING over any attempt to convince your constant correspondent, Mr. Crisp, that Messrs. Flower and Young are neither of them Dutchmen, I shall make a few observations on the conduct of those gentlemen who came, some like the wise men from the east, others from the west, the north, and the south, to bestow upon the practitioners of Camberwell terms of the most "enlightening character;" and so delighted were they with the success of their mission, that I believe it has since been celebrated "where sit, involved and lost in curling clouds of Indian fume, all loud alike, all learned, and all wise," some of those persons whose sweet voices made the room at Camberwell echo with the melodious notes of black sheep, &c. &c.

Being present at this first meeting, and witnessing what I am not singular in calling "din and confusion," and which Mr. Crisp, although not present, did not on that account refrain from giving his account of it, I do not see why I should not give an account of the second, seeing all those with whom I have conversed upon the subject, holding different opinions on the formation of a Medical Club, and who were present upon the occasion, were unanimous in describing it as the most disgraceful scene they had ever witnessed. One gentleman told me that if I complained of such terms as "black sheep, not upholding the honour and dignity of the profession," it was positive politeness compared with some of the terms made use of at the last most triumphant meeting. Another, who was not favourable to the Club, declared he was so disgusted with the proceedings as to leave the room with a full determination never to attend another medical meeting. A third gentleman stated that "thieves, traitors, robbers," and other such like terms, were used; and at length, fearing that the parties who talked of shedding the last drop of blood in the cause would suit the action to the word, thought it better not to wait the "tug of war," but act on Falstaff's maxim —deeming discretion the better part of valour: and he also left. I could give their names, but as they said they were heartily "sick of physic," they begged to be excused. Had there been nothing more than the parties on each side stating their opinions on the question, without imputing motives and offering personal insults by wholesale, I should never have put my pen to paper on this subject; and it is to such conduct as this I apply the term "gross abuse:" I think it quite unnecessary to waste words about posting the names, after seeing them published in the following week's Gazette. I am aware that verbal statements are not considered so authentic as written; I therefore quote the imputation of "concerting measures to take the bread out of the mouths of the poorer class of surgeons," as applied to "Forbes, Bean, Brown, and Flower:" and as defiance seems to be the order of the day, I defy either Mr. Crisp, or Mr. Bowen, or those other gentlemen who have not yet thrown off the mask—who have not yet come out from their hiding-places—and who have taken far more pains than Mr. Crisp to ascertain whether Messrs. Flower and Young pay a rate for a Camberwell gas-light, or are one foot removed out of Camberwell parish! and I doubt not but as the masks fall from their faces, and they come out from the Holland Street Dutchman, we shall recognize faces darker and longer than any that yet figure on the scene; and as we gaze in mute astonishment upon the mottley group, we may well exclaim, "Pity that all these should be defied to prove the charge of "concerting"! Yes; but methinks I already hear some one *assert*,—It is easy for us to get through all our difficulties; try first the scheme that has silenced all who have yet ventured to oppose us: you have only to put on the "assertion and misstatement extinguisher; and in case that fail, try the Dutch mode of recapitulating the arguments"! I put it to any candid mind to say, whether Mr. Crisp, in what he calls the recapitulation of my arguments, has not "mapped them out in such a way as to suit his own purpose." Mr. C. states that the very basis of the system is unstable and rotten; for it is founded in an untruth—that the members are told they will become independent, when, in fact, they are in a state of dependence; and that the great evil of the scheme is—that it holds up a bait for the upright man to leave the path of honesty, &c.; and yet with wonderful sagacity admits—that the plan may be practicable in a coal mine! I think it requires but little argument to show that, according to this doctrine of independence, we are all living in a state of dependence, from the king down to the lowest subject.

I stated, as he will see, if he will take the trouble to read my letter over, that there were a numerous class of professional men who considered it no degradation—no dishonour—to the professional character, to lend their assistance in raising the moral condition of the poor, by cherishing that feeling of independence, &c. This is widely different from stating this system will raise the moral condition of the poor, and make them *independent* in Mr. Crisp's sense of the word. I again assert, that we cherish a spirit of independence when we place the poor in such a position as enables them (by our accepting a small sum suited to their circumstances) to obtain our assistance without being deing deterred by a fear of incurring to them embarrassing pecuniary liabilities; and small, indeed, must be his experience of the feeling of which I speak, who supposes I mean by independence "riding in an elegant chariot, receiving his guineas," &c. I envy not the feelings of any man who can come to this question wresting words from their legitimate meaning, or arraying himself in the flimsy mantle of the wrangling logician. The independence, sir, of which I speak is that of the spirit which those who harbour in their own breasts would gladly see diffused around them: it is a spirit which, retaining a rational desire to perform the relative duties of life, would yet scorn to receive that as a de-

graded pauper which is placed within his reach as a positive right. Yes; I would cherish this feeling even at the risk of being occasionally overreached by the cunning and dishonest; and as to not being able to compel the latter class to pay towards the Club, I am not sure that the club is not better without than with them; at all events, if it be an evil, it is one that if left to itself will work its own cure: it will at any rate prevent the dishonest man wearing the mask of the honest; and if without his mask he cheats the profession, it will be their own faults: and as to the objection of the higher grades adopting it, "I said under judicious limitations," by which I meant to be understood, the exclusion of abuses. It is not a fair mode of argument to bring against the usefulness of this or any other measure, the abuses to which it may be liable in common with every thing else that is good and beneficial to mankind: if such a mode of argument be permitted, will any of the noble institutions which have for ages been the praise and admiration of the wisest and the best of men, bear the test of this method of attack? Independent, indeed, as they are called, they are still, according to the doctrine of Mr. Crisp, based on a rotten and unstable system, founded on the "untruth" that while they are independent, they are yet in a state of dependence. Equally absurd is it to suppose that a system founded for the express purpose of preventing the poor man sinking into absolute pauperism, should be held up as a bait for the upright man to leave the path of honesty and "independence," to walk in that of pauperism. I need not argue this point, as there are none independent, according to Mr. Crisp's doctrine, and therefore the path is of no use; so that the bait is quite superfluous, as no wise man thinks of fishing in a pond where he knows there are no fish. I did not state that the medical practitioners in his neighbourhood were in the habit of sending in ruinous bills to the poor; so that the tone of defiance, like the bait, is quite superfluous: I did not offer to bring forward any invidious distinctions of those ruined by paying a long bill; and when I stated that the advantages of medical clubs offered the poor the option of selecting their own medical attendant, I was not such a Dutchman as to think I spoke of a shadow: I took for granted their formation.

And now, sir, a few words on the degradation implied in the swinish simile of physicking a pig, which has no legitimate bearing on the subject; the contested principle not applying to individual sixpences or shillings, but mainly to the aggregate; the many constantly making up a purse to defray the exigencies of the few; probably by such means insuring an amount equal to that which many practitioners are now receiving for attendance on the various metropolitan institutions. I am accused of placing the highest grounds in the foreground, and suspecting the grand secret of non-remuneration would be found concealed under the mask of the zeal for the honour and dignity of the profession. I placed before them in the prominent part of the picture the gist of the question on their side of the argument, and then, as if touched by the magician's wand, the mask suddenly fell off, and presented in large and flaming characters this motto:—"A less sum than the village farrier would expect for physicking his pig." Not having instituted any comparison between young gentlemen (who either have or have not attended lectures) with the parish midwife, I feel it unnecessary to enter on that subject.

> "O wad some power the giftie gie us
> To see oursels as others see us!
> It wad frae monie a blunder free us
> An' foolish notion."

That each individual has a right to form and enjoy his own opinion I readily admit; but to impute unworthy motives to others — to descend to low and vulgar terms of abuse — or to palm individual opinions on the public as the sense of the profession, this I utterly deny: it was disgust with such conduct that drew forth my first letter. Attached as I feel to the profession of my choice, and jealous of all its properly defined rights and immunities, and desirous of cultivating a good understanding with all my professional brethren, I should have reviewed even more narrowly than I did the steps by which I arrived at my determination, had the subject been fully, fairly, and rationally discussed. It, however, affords me satisfaction to find so many of my professional neighbours have come to the same conclusion as myself. I presume not to say that I am right in the estimate I have formed of the worth of this system; but inasmuch as the advantages of theoretical data are far outweighed by the possession of practical realities, and garnered experience availeth more for useful purposes than the thick darkness of gainless uncertainty, I trust, with so many in its favour, it will not be condemned, or rather I should say abandoned, without being put upon its trial.

Were this, indeed, a question involving any "professional rights,"—something beyond the mere breaking a fly upon the wheel, or impaling a beetle,—I trust I feel I should be found in the vanguard of the onslaught; but to wage a puny warfare with "emaciated want,"—to gnarl over a fleshless skeleton,—or to make keen a

weapon against a keener misery, is to achieve such honour as my humble ambition descricth not even from afar, and for which I have neither aim nor hope to imitate; and although this system comes recommended by the Poor-Law subordinates, why are we to be frighted from our propriety to espy the mountain in the mole-hill, or with the distemptered imagination of the monomaniac, to conjure up more devils than vast hell can hold, even in the fleshy form of Poor-Law Commissioners?

—— "Tigris agit rabidâ cum tigride pacem
Perpetuam, sævis inter se convenit ursis."

But whilst possessed of the *mens sana*, and enjoying the blessing of sober consciousness, I hope to see things as they really are, and not through the medium of an affrighted or distorted imagination. I have to crave your indulgence for so soon after taking my leave, again intruding on the columns of your journal; but not liking to be silenced, either by the misstatement extinguisher, or the Dutch mode of recapitulation, I am induced to appear again before you to offer thus much in explanation.

"What right, what true, what fit, we justly call,
Let this be all my care—for this is all."

J. S. Flower.

Camberwell Green,
Nov. 1, 1836.

CAMBERWELL PROJECTED CLUB.

MR. HULBERT'S REJOINDER.

To the Editor of the Medical Gazette.

Sir,

When I last addressed you, I had not intended continuing a controversy relative to the late occurrences at the Camberwell meeting, at which the *honour of the medical profession was so opportunely and spiritedly redeemed;* but the *facts* mentioned in my first letter having given rise to many *fallacies*, and to none more obvious than that of their being represented as *mis-statements*, with the incorrect account given by Mr. Crisp in the Gazette of October 22d, in *justification* of those *personalities* to which he candidly acknowleges *he descended*, has inclined me to a different course.

The correctness of the account I gave of the conduct displayed towards me at that meeting being known to all who were present, I should have considered the attempt to represent it as a *falsehood* as too contemptible to notice, had it not been for the extensive circulation of your journal amongst the most respectable classes of the profession, with many of whom, in different parts of the country, as well as in the metropolis, I have the honour of being personally acquainted.

To several who were at the Camberwell meeting it must have appeared exceedingly strange to have witnessed the reception given me by Mr. Crisp and a few others who are *non-residents* in Camberwell; and stranger still to have read the *veritable* account transmitted to the Lancet, that the "*honour of the profession* had been *so opportunely and spiritedly redeemed*" on that occasion.

If it is a "*redemption of honour*" to have recourse to "invectives, personalities, and misrepresentations," we are certainly arrived at a new era of the profession, and must henceforward consider those principles advocated by Percival, Gregory, and other writers on *medical ethics*, as the vague theories of bewildered imaginations, glittering, like *ignes fatui*, with delusive light, to lead their followers into the gulphs of error and confusion, and not as the result of experience, reason, and strict propriety of moral conduct.

In his letter of the 22d ult., Mr. Crisp has commenced in so emboldened a strain, that, with the determination of carrying every thing before him, "he trusts you will give insertion to *all his statements*, as he is prepared to *prove their correctness*." Had *all* his statements been correct, they would unquestionably reflect a vast deal of professional honour upon him in giving them publicity. But with the view of undeceiving those who may have read his statements, more than with the intention of justifying myself, I now address you, in order to give an explanation of the *very correct accounts* which he has brought forward.

In the first place, Mr. Crisp observes, that at the Camberwell meeting I had made the following statement:—"I am sure I do not wish to act in opposition to my professional brethren." This is partly, but not wholly, correct; for when speaking of my having advocated the cause of Self-supporting Dispensaries, I very well recollect saying, that "had I ever considered they would have a tendency to *injure* or *degrade* the medical profession, I would not have taken the steps I had done, as I had no wish to act in opposition to the welfare or respectability of the profession; but that I was firmly convinced, as regarded such institutions, that they would not be prejudicial to the real interests of my professional brethren, or to the welfare of the public." How far the "whole tenor of my proceedings has not been actuated by this feeling," it remains for those of my professional brethren to

decide who are better acquainted with me than the author of such a statement, and who can look upon my conduct with an unprejudiced eye and unperverted imagination.

The circumstance of my coming into this neighbourhood a stranger, ought to have entitled me to the courtesy generally shown to strangers; how far this was shown to me at the meetings at Camberwell, Newington, and Southwark, let those who were present at those meetings determine. In the circular to which an allusion has been made, it was mentioned, that "for several years past a considerable portion of my time had been devoted to the medical attendance of the poor; and that having witnessed the good effects of Self-supporting Dispensaries, I had invited my esteemed friend, Mr. Smith, the projector of those institutions, to explain their principles and advantages to the clerical and medical professions, and any others who feel an interest in the welfare of the poor." This statement I made chiefly on account of my being, comparatively speaking, a stranger. Above 400 copies were printed, and a man accustomed to distribute circulars employed, on the 5th of August last, to deliver them according to their directions. Unacquainted with the names and residences of my professional brethren in this neighbourhood, including Newington, Walworth, Camberwell, &c. &c., I requested a few friends to assist me, and by one medical gentleman I was favoured with upwards of fifty names, exclusive of those given me by others, to each of whom a letter was addressed. To gentlemen of the clerical profession very few were sent; and I am not aware of there having been *one* at the first, and I believe not more than *three* or *four* at either of the subsequent meetings. It has been stated by Mr. C. that a very small number of these circulars reached the medical profession; and that "my excuse for the omission was, that my boy was unable to find the residences of the medical men, and therefore returned the circulars." This account is incorrect, as I mentioned that the man whom I had employed, and paid for his trouble, had only performed part of his duty, and that I had endeavoured to remedy this deficiency as much as was in my power and the shortness of the intervening time would allow. A sufficient number of the circulars were, however, distributed, to ensure the attendance of at least three to one of any other class of persons who were invited.

In the next place, Mr. Crisp asserts that at the adjourned meeting (September 7th), he "found me sitting with men who characterized the members of our profession as gross mercenary conspiritors," &c. This is so glaringly incorrect, and such a perversion of the truth, as to require a more particular explanation. So far from his finding me siding with the gentlemen alluded to, when I entered the room himself and others were assembled, the chair had been taken for several minutes, and the business of the evening had commenced; and during the remainder of its continuance I was in a different part of the room, for the convenience of being near the chairman, and had not ever seen either of those gentlemen before. The hostility displayed to a measure acknowledged, by many who opposed themselves to it, to have an excellent tendency in respect to the industrious though poorer classes of society, and that their opposition arose from the apprehension of its interfering with their professional interests, and that they were determined if possible to crush it, together with the hissings and clamour displayed against the promoters of such a measure, excited the indignation of some who wished to inquire into the merits of the cause, and led to a warmth of expression which they doubtless (at the time) considered themselves justified in employing. The sneering and contemptuous manner in which the allusion to the parable of the good Samaritan, and the precepts contained in the sacred volume, were received, also excited a feeling of indignation, that men, who in the exercise of their profession, especially among the lower orders, are witnesses of much human suffering and misery, should consider the doctrines of Him, "who went about doing good, and healing all manner of diseases," as deserving of their contempt and ridicule. I will not enlarge upon this point, which, however it may raise another sneer at my expense, I do not hesitate to declare, exerts considerable influence on my mind, being aware that theological polemics should as much as possible be refrained from on occasions like the present. I will therefore pass on to the next statement of Mr. Crisp, wherein he asserts that, in writing to the Editor of the Surrey Standard, I had called his account impartial, "when I knew that the reporter only gave the arguments of those who were favourable to the plan." This also partakes of incorrectness, and facts can here speak for themselves. The report published in the Surrey Standard of Sept. 10th was the least incorrect of any which has appeared relative to the Newington meeting of Sept. 7; notwithstanding the assertion of a correspondent signing himself "Chirurgus," in the following number of the same journal, that "a more partial, one-sided statement was never penned." Upon referring to it I see no cause for altering my opinion. Let the report be compared with that in the Lancet (so celebrated for *correctness* and *impartiality*) and then let

any unprejudieed person be asked which aecount presents the character of one-sidedness, and which the contrary.

I am, sir,
Your obedient servant,
J. F. Hulbert.

6, Trinity Square, Southwark,
November 2, 1836.

[Want of space obliges us to omit that part of our eorrespondent's letter which relates to Mr. Crisp's remarks on the eommunication from Mr. Hawes, M.P., whieh was read at a subsequent meeting.—E. G.]

PARISH UNIONS.

QUERY FOR AN OLD NAVY SURGEON.

To the Editor of the Medical Gazette.

Sir,

May I, through the medium of your valuable periodical, ask your eorrespondent, the Old Navy Surgeon, if he wishes your readers to understand 11,800 to be the pauper population of those sixteen parishes comprising the union, one of whieh, Grove, in Bucks, has twenty-one inhabitants. I rather suspeet he has been ealeulating the gross population; if so, all his eomputations and eomparisons are wrong. He feelingly describes the diseomforts of the union officers, forgetful all eountry praetitioners are exposed to the same. I do not intend to diseuss point by point, but I eonsider the whole aecount to be exaggerated; and being a constant reader of your work, I feel regret it should be made the channel of such communications.

If you consider this worthy of a niche in your columns, you will oblige,

Your obedient servant,
E. C. T.

Nov. 9, 1836.

[We have no doubt the "Old Navy Surgeon" will readily explain.—Ed. Gaz.]

ANECDOTE OF DUPUYTREN.

The late M. Dupuytren in his last illness had effusion into the chest eonsequent on a pleurisy. He was at first disposed to have himself tapped for it; but three of his medieal attendants being against, while two were for, paraeentesis, he ehanged his mind, and observed, "I would rather die by the hand of God than of man!"—*M. Husson in the Acad. de Méd.*

HINT TO PHRENOLOGISTS.

A Dr. Gaubert, who has been holding forth at the Phrenological Society in Paris, on the skull o a lady who died lately, has got himself into a scrape with her relations. They have brought an action against him for defaming the family, in the remarks whieh he made on the character of the deeeased; and a newspaper which reported the defamatory trash has been included in the action. The trial was to have taken plaee on the 9th instant.

APOTHECARIES' HALL

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

November 10, 1836.

John Senior Turner, Gleadthorpe Grange, Notts.
James William Jeans, Grantham, Lincolnshire.
John Henry Bell, New Cut, Bristol.
George Tweddell, Bishop Auckland, Durham.
John Hatton, Manchester.
Edward Hodge Eykyn, Ackleton, Shropshire.
William Blakely, Kington, Herefordshire.
William Elliston, Ipswich.
George Anthony.
Joseph William Field, London.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Nov.* 8, 1836.

Age and Debility	22	Hooping Cough	5
Apoplexy	4	Inflammation	37
Asthma	14	Bowels & Stomach	2
Cancer	1	Brain	1
Childbirth	3	Lungs and Pleura	1
Consumption	55	Insanity	1
Convulsions	22	Liver, diseased	2
Croup	4	Measles	7
Dentition or Teething	4	Mortification	4
Dropsy	5	Rheumatism	1
Dropsy on the Brain	8	Small-pox	7
Dropsy on the Chest	1	Sore Throat and Quinsey	1
Epilepsy	1	Thrush	1
Erysipelas	1	Unknown Causes	10
Fever	4		
Fever, Scarlet	9	Casualties	8
Fever, Typhus	3		
Heart, diseased	1		

Increase of Burials, as compared with the preceding week . . 101

METEOROLOGICAL JOURNAL.

Nov. 1836.	Thermometer.	Barometer.
Thursday. 3	from 34 to 50	29·70 to 29·59
Friday . . 4	36 46	29·53 29 39
Saturday . 5	36 45	29·14 29·34
Sunday . . 6	26 45	29·38 Stat.
Monday . . 7	27 41	29·52 29·72
Tuesday . . 8	22 39	29·87 30·01
Wednesday 9	25 50	29·94 29·77

Prevailing winds, W. by S. and S. W.

Generally clear, except the 3d, 4th, and 9th. A heavy shower of rain and hail, accompanied by thunder and lightning, on the evening of the 3d. Rain on the 4th, and mornings of the 5th and 9th. Lightning very vivid on the evening of the 6th.

Rain fallen, ·35 of an inch.

NOTICES.

Chirurgus.—The subject of the Letter requires eonsideration: next week, perhaps, we shall be able to give our eorrespondent an answer.

We regret we have not spaee this week for Mr. R. Ceeley's eommunication relative to the Bucks Assoeiation.

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 19, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture VIII.

Medico-Legal relations of the Reproductive Function—Inability, or Impotence, a ground of Divorce—Legal distinctions respecting the Marriage Contract — Suits of Nullity of Marriage.—Impotence in the Male: 1. *Physical Causes—Inadequate or imperfect Development—Some curious Cases—Castration—Extraordinary Case of Count Sorlisi.* —2. *Moral Cause—Fascination, or Witchcraft — Fear — Desire—Habits of intemperance — Partial impotence — Errors of the ecclesiastical or canonical authorities—Speculations of theologians.*

We now enter upon a large class of relations, embracing subjects of much interest and importance in Forensic medicine. I allude to those connected with the generative or reproductive function. When I lately treated of Sex, I did so merely with reference to structure, whether normal or abnormal, and without any special regard to the uses of the parts. I shall, however, now have to notice those uses,—and the abuses also.

Questions arising out of the consideration of the sexual functions are usually divided under the several heads of Impotence and Sterility, Violation, Pregnancy, Abortion, and the Births of children.

Legal distinctions.—Certain legal consequences are attached to the imperfect exercise of the sexual functions, and it devolves occasionally on the medical jurist to determine how far the power of ministering to reproduction exists in the individual. In respect to marriage, some of the most valid grounds of divorce rest on the proofs of inability; and in charges of violation, abortion, &c., evidence of the fact is almost equivalent to exculpation.

As I shall hereafter treat distinctly of the subjects involved in the latter charges, I shall confine myself on the present occasion principally to the question of inability in reference to marriage.

I must premise, that I intend not at present to consider all the medico-legal circumstances connected with marriage, but only those which have relation to the chief object of the married state, as contemplated by the laws,—the procreation of children. Other considerations which may also form grounds of divorce, may more properly be introduced hereafter.

Marriage, how contemplated by the law.—Marriage, in the eye of the law, the *common* law of England, is simply a civil contract. The holiness of the wedded state is an attribute which it possesses in the estimation of the *ecclesiastical* or canon law; and in countries where this law prevails more than it does among us, it will be readily understood that there is ample room for casuistry, and for much medico-legal, as well as juridical interference.

The business of the medical jurist, in this country, is considerably limited, in relation to the question of marriage, in consequence of the plain view taken of the contract by the law of the land: still, however, the difficulties which occasionally occur, and which it is the province of the professional witness to remove, are by no means of a very simple or superficial nature; on the contrary, they require our best and gravest attention.

Conditions of the contract.—The conditions which render a marriage legally valid, are briefly those which constitute the validity of any other contract,—namely, that the contracting parties be willing, that they be able, and that they

shall have complied with certain requisite formalities. Now it is on questions connected with the two first conditions that the medical jurist is sometimes required to lend his assistance. He may have to consider whether the parties, or either of them, be capable of exercising a will or a discretion, in respect to entering on a matrimonial contract: one or other, or both the parties, may be disqualified, for example, by reason of too tender or too advanced an age, or there may be some imbecility or unsoundness of mind, not admitting the exercise of a will. Of such a state of things, I shall enter on the consideration in a future lecture.

On the other hand, as to the condition of being *able*, it will probably be the duty of the medical jurist to examine how far either party is qualified in respect to bodily circumstances. He may have to show whether either party does or does not labour under certain disabilities which would invalidate the contract; under certain corporeal infirmities, in fact, existing at the time the marriage is celebrated.

Non-age.—I have already mentioned the ages recognized for legally forming a marriage-contract at the earliest—fourteen for the male, and twelve for the female. But the ecclesiastical courts look rather to the habit, strength, and constitution of the parties; they only inquire whether they be *habiles ad matrimonium*, and not how many years they may have numbered: and, indeed, the common law will hold even infantile marriages, solemnized with due formality, valid, when the parties, on reaching the ages just stated, do not demur to the contract.

Sexual inability.—The corporeal imperfections are chiefly those constituting impotence, or an inability to have sexual intercourse; and this may belong either to the male or the female. Neither party should be impotent at the time of the marriage; and should it afterwards appear that either was —that, in fact, the marriage was not consummated, and that the inability continued—it is a ground for annulling the marriage in the ecclesiastical courts, although the party so disqualified was ignorant that the defect existed at the time.

Grounds of divorce.—It is to be observed, that there are two kinds of divorce; the one, which may be considered complete, *à vinculo matrimonii*; the other incomplete, *à mensa et thoro*. Now impotence is a principal ground for obtaining the former; and in suits for that object, the party complaining must prove that the incapacity existed at the time of the marriage, and continued to be of a nature incurable: if the impediment was not natural, but supervened after the marriage, there is no sufficient ground of divorce.

"In a suit of nullity," says Mr. Chitty, "by reason of the alleged impotency of the husband, a certificate twelve years after the marriage, that the wife still was *virgo intacta*, although *apta viro*, coupled with two several confessions of the husband of his incapacity, and with proof that the woman's health had suffered, though the husband had not given in his answers, and that he had removed into France, and had refused to undergo surgical examination, was holden sufficient in the ecclesiastical court. On the continent, suits for a divorce on this ground are frequent; but for the honour of English ladies, their delicacy in general deters them from thus publicly complaining; and such suits are comparatively rare, unless there be other strong ground for seeking a dissolution of the contract—as intolerable ill temper, which, although of itself not a sufficient ground for a divorce, may yet constitute an inducement to make the disagreeable disclosure, and proceed for a divorce on the legal ground of the incapacity of the husband."

Distinction between sterility and impotence.—Impotence, as I have said, may belong to man or woman; and so may sterility,—understanding by this term, an inability to be prolific. Sterility implies, that notwithstanding the existence of an aptitude for sexual intercourse, there is no power of procreation. This species of inability, however, is more commonly imputed to the female than the male; for where no charge of impotence can be established against a man, it is difficult to make out his sterility, though there may be strong presumption that he is *bonâ fide* unprolific.

The question of sterility in either sex is in great measure inferential, and the fact is generally dependent on internal organization, of which the medico-legal examiner cannot in general have sufficient cognizance in the living body. For this reason, and because in suits of divorce it is the question of impotence which is principally entertained, we may, perhaps, more usefully direct our attention to this infirmity than the other, although both are so closely connected, that it were not possible, even if desirable, to wholly separate the consideration of sterility from that of impotence.

We may divide the subject as it relates to males and females: and first let us inquire what are the causes and signs of

IMPOTENCE IN THE MALE.

Inability to have sexual intercourse may in man arise either from physical or moral causes.

1. *Physical Causes.*

(*a.*) *Insufficient development.*—The age of the party may be such as naturally to exclude the idea of potency. Previous to puberty the individual must be presumed, and is presumed by the criminal law, to be incapable of the generative act: the seminal secretion has not yet begun, and the stimulus derived from that source is consequently absent. On the other hand, old age may have extended its withering influence over the sexual parts, and the man who was prolific may cease to be so any longer. But the limits of either period cannot be precisely fixed. Puberty is in many instances retarded, in many accelerated, owing to various causes: the climate, habits of life and education, and constitutional peculiarities, have material influence; and accordingly we have on record many examples of precocious puberty, and not a few of its late development.

With respect to the aged, it is still more difficult to say when, even on an average, the powers of procreation cease. Aristotle, long ago, fixed on the seventieth year; but numerous instances might be adduced to show that the generative power has often continued to a period much more advanced. Boerhaave says he has known examples of men who were still prolific at ninety.

In the celebrated Banbury Peerage case, it was urged among other arguments against the claimant of the title, that the ancestor under whom he claimed could not have been the son of Lord Banbury, because that nobleman was 80 years old when the child was born. The remarks of Lord Erskine on this point are worth quoting:—"But what evidence is there of Lord Banbury having been impotent? There is no statute of limitations on the powers and faculties of man. Instances of robust longevity might be cited still more extraordinary. Sir Stephen Fox married at the age of 77, and had four children; the first child was born when the father was 78, the second and third were twins in the following year, and the fourth was born when the father was 81. Parr became a father when even his son was of a more advanced age than Lord Banbury."

Sir Samuel Romilly, in his observations on the same head, thus expresses himself: "The objection to the age of Lord Banbury may at once be dismissed. The law of England admits of no age at which a man may not become a father; and many medical authorities may be cited to show that this rule is founded on reason. Dr. Gregory, of Edinburgh, whose name must be familiar to all admirers of science, says upon this subject:—'Magna autem de his rebus differentia; decantantur enim exempla senum in castris Veneris strenue merentium, postquam centum annos compleverant; neque sane dubium, aut adeo rarum octogenarium patrem fieri.' Haller likewise pronounces a man of 90 to be capable of procreating. Parr became a father in his 140th year. In short, the liberality of the law on this subject is excessive, for there is no age, from seven upwards, at which a man is denied the privilege of having children." I take both these extracts from Mr. Le Marchant's book on the Gardner Peerage.

(*b.*) *Imperfect structure.*—A more obvious cause of impotence is found in an imperfect structure of the genital organs. Either owing to congenital malformation, or some factitious alteration of the parts, they may be rendered incapable of exercising their proper functions.

(*α.*) *Affections of the penis—Deficiency.*—It may happen that the penis is wholly or in part deficient. There have been instances of this part being totally absent from birth, and numerous examples of its removal by wounds, disease, or surgical operation. When the organ is completely absent, there can be no intromission, and, to all intents and purposes, the individual must be accounted impotent; unless, indeed, we understand that term in some other acceptation than that in which it is usually employed.

I have been made acquainted, through the kindness of Mr. Whitmore, of Coldbath-square, with the particulars of a curious case which came under his observation. In the year 1823, a man, of the name of Staunton, lost his penis: it was amputated by his wife, one night, while he lay asleep by her side in bed;—the part was cut clean off at the root. Yet this very man was brought up, about three years ago, before the magistrates at Union Hall, on a charge of bigamy and filiation. He was presumed to have become the father of a child after his mutilation. This, at least, was the impression of many who knew the individual. But Mr. Whitmore thinks it doubtful that the child was begotten, however it might have been born, after the outrage. If the child's age could be ascertained, it would settle the question.

But where any portion of the organ is present, we must be cautious how we pronounce against its efficiency. It is an ascertained fact that impregnation may be effected if the semen be only deposited within the very orifice of the vagina. Hence it would be rather precipitate to assume the impotence of a person well formed in other respects, who should appear, on examination, to have merely a portion of the corpora cavernosa and urethra, yet capable of being introduced within the external parts of the female. The glans penis is known, in frequent instances, to have been

lost from accident or disease, yet the individuals so affected have had sexual intercourse as usual. "Piazzoni relates a case," says Dr. Paris, "where both the corpora cavernosa were destroyed, but, as the canal of the urethra was preserved, the person could perform the act of coition without difficulty. Frank also states an instance in which so considerable a portion of the penis had been carried away by a musket-shot, that, when the wound healed, the organ remained curved, and yet it remained adequate to the performance of its functions."

I am indebted to Mr. Whitmore, who so obligingly communicated the case already quoted, for the two following also, which are, perhaps, not less curious:—"I have had two other cases where the loss of the penis had been sustained. One occurred in one of my parish patients, who died a few weeks ago: he left a fine family of children; his penis had been amputated many years since. The other case occurred in a boy about fifteen, from the bite of a stone-horse. I remember, while under treatment, he sent word to his sweetheart, "not to fret, for that he should be able to *stump* her yet!" These were his words; doubtlessly a faithful indication of his feelings and intentions.

Hypospadia and epispadia. — Another imperfection of the penis, which might seem likely to interfere with the generative act is, that irregular opening of the urethra constituting hypospadia, or epispadia*. But persons of such a conformation have not only not been impotent, but unquestionably prolific. Belloc gives a curious instance of a hypospadian who had four children; two of them having precisely the same malformation as their parent.

Even where the orifice of the urethra has been as low down as the root of the penis, impregnation has been effected, with the aid of an artificial contrivance. At least we have it, on the authority of Sir Everard Home, that John Hunter gave certain directions to a person so affected, which were attended with complete success.

An hypospadian assisted by Mr. Hunter.— This celebrated case is so often referred to, that it may be as well to state it to you in the words of Sir Everard Home himself, who originally published it in the Philosophical Transactions for the year 1799. The paper in which Sir Everard (then Mr.) Home relates the case, is one on the subject of hermaphrodism in a dog; and he introduces into it several very curious observations on reputed hermaphrodites of various species; and, among the rest, he notices those malformations in which inexpert observers have found reasons of their own for supposing the presence of hermaphrodism. Sir Everard tells us that the gentleman in question had an aperture in perinæo, which it was found impossible to stop; for as the canal of the urethra was continued to the external orifice of the glans penis, the attempt to close the anomalous passage was made, but in vain. "Under the circumstances," says Sir Everard, "the person married. When he had connexion, the emission was complete; which proved that the testicles were perfect, but the semen always passed out at the perinæum. The late Mr. Hunter was consulted to remedy, if possible, this inconvenience, and to enable the person to beget children. After the failure of several modes of treatment which were adopted, Mr. Hunter suggested the following experiment. He advised that the husband should be prepared with a syringe fitted for the purpose, previously warmed; and that immediately after the emission had taken place, it should be taken up by the syringe, and injected into the vagina, while the female organs were still under the influence of the coitus, and in the proper state for receiving the semen. This experiment was actually made, and the wife proved with child. Upon a subject of this kind, it is proper to speak with caution; but from all the attending circumstances, no doubt was entertained by Mr. Hunter or the husband, that the impregnation was entirely the effect of the experiment. Spallanzani's experiments "upon animals," adds the writer, "were made several years after this proposal of Mr. Hunter was attended with success*."

Phymosis and other affections. — But to return to the imperfections of the male organ. The part may be affected with congenital phymosis, and this, unless an operation be performed, will certainly prevent the generative act. It was a custom, in ancient times, to produce an artificial phymosis by *infibulating* the prepuce of young slaves. The method was effectual in precluding sexual intercourse, and was adopted in order to keep them in high health and beauty: perhaps also to restrain them from vicious indulgences.

The muscles of the penis have sometimes been affected with paralysis; and while such an affection lasts, it must be considered as inevitably entailing impotence. The cause of such a condition may generally be traced to some disturbance of the nervous system, through which channel alone the remedy must be supplied. Priapism frequently occurring, severe strictures, and certain diseases of the

* See Lecture V., p. 132, *ante*.

* Phil. Trans., 1799, p. 161—2.

prostate gland, may also be considered as occasional causes of impotence: but as they are all more or less remediable by art we must take care not to form too hasty a medico-legal diagnosis.

(*β.*) *Affections of the testes.*—The imperfections hitherto noticed have all belonged to the penis. We have now to notice another cause of impotence, arising more or less from deficiency or disease of the testes.

Where the testes are wholly absent—removed by an operation, or carried away by some injury—the impotence of the party is obviously to be inferred; but in such case, the marks of castration, or the cicatrices from the injury or wound, ought to be discernible. Where the testes are simply not found in the scrotum, and there is no appearance of their removal, we must inquire further before we hazard an opinion. These organs may not have descended into their usual place, nor have passed the abdominal rings: they may still be in the abdomen (persons so affected are called *Crypsorchides*), where their anomalous situation during adult life, is, in the opinion of some, so far from being an impediment to the reproductive function, that it is rather conducive to their efficiency. This, however, is very doubtful.

If the testes have wasted away, as they sometimes do from disease—elephantiasis, for example—proofs of that fact will not be wanting in the individual: the characters of manhood will be more or less absent; the sexual appetite will be lost; and, in short, it will be a case of incurable impotence.

The same result must have befallen those individuals whom it was the custom to emasculate in childhood by bruising the testicle, as is still done with deer and other animals. The injury deprives the parts of their organic life, they become atrophied, and unsuited to perform their natural functions.

As to castration, it is well known that it does not immediately or necessarily entail impotence. Much will depend on the extent to which the operation is carried, and the time of life at which it is performed. If both testes be removed in infancy, or boyhood, the individual never acquires a masculine character — he cannot but be impotent; but where castration has been effected in an adult, the semblance of virility will still be retained; though it is said that the beard will become more thin and scanty. Persons of this description are known to retain a certain imperfect power of sexual intercourse, attended with the discharge of a mucous fluid from the vesiculæ seminales, and probably from the prostate. But it is out of the question that they should ever be prolific, unless the generative act should be accomplished some short time after emasculation; for there may still be some semen in the vesicles. Otto, indeed, mentions one case in which he found plenty of apparently good semen in the vesiculæ seminales of a man who had castrated himself a year before, in a fit of melancholy.

In cases where one testicle is left (persons so affected are termed *Monorchides*), no matter how the other have been lost, we must cautiously abstain from pronouncing against the generative faculty of the individual. In fact it has been proved, in numerous instances, that *two* testes are by no means essential to potency, notwithstanding that the parliament of Paris, in 1665, decreed that the marriage contract should not be held valid unless *two* testes were producible!

Remarkable case of Count Sorlisi.—It was about this very date that the circumstances of a celebrated case were much discussed in Germany: I allude to the marriage of the Count de Sorlisi. Valentin, in his *Novellæ Medico-Legales*, gives a full account of the case, under the title of *Conjugium Eunuchi;* and Dr. Ferriar has presented us with a very interesting abstract of it, in his Illustrations of Sterne. I shall take leave to give you a brief summary of the principal facts.

Bartholomew de Sorlisi, a young nobleman, held a commission in the army of Charles XII. of Sweden; but his military career was brought to a close by a catastrophe which befel him at the battle of Fühnen: he received a musket-shot, by which he was deprived of the testes—*bombardæ ictu eviratus est.* The wound was healed; but disgusted with the chances of war, he retired to an estate in Pomerania, where he endeavoured to forget his misfortune in the occupations of a country life. Here he became acquainted with a family in which there was an only daughter, Dorothea Elizabeth Lichtwer, a beautiful girl of sixteen. Of her he became deeply enamoured, and the attachment being mutual, he was induced, forgetful of his situation, to make proposals of marriage. These were readily accepted, and the time fixed.

But unfortunately some of the lady's relations were opposed to the match, chiefly on account of a difference of religion between the parties, the Count being a Roman catholic; this, however, might have been got over, had not an unexpected piece of treachery thrown Sorlisi into the hands of his enemies. It appears that in unsuspecting confidence he consulted the physician of the Lichtwer family, and disclosed to him the secret which preyed upon his mind. The doctor, forgetful of his inaugural oath, shamefully betrayed his patient, and furnished the discontented party with

facts which seemed sufficient to overwhelm the object of their dislike. Sorlisi faced the storm gallantly, and by exposing his life in some duels, soon procured an exemption from further private insults.

It should be mentioned that circumstances had by this time gone so far, that it was necessary for the Count to explain his situation to his intended bride, and her only surviving parent. How this delicate task was accomplished, we are left to imagine: but the result is known; Madame de Lichtwer was inclined to give up the match, but Dorothea declared that no misfortune could affect her attachment, and that she was determined to pass her life with Sorlisi under every disadvantage. The parties were now betrothed with the mother's consent. How to complete the marriage was the question; for already the theological faculties had taken alarm, and murmured so loudly against the proposed scandal, that it was evident no clergyman would venture to solemnize their nuptials.

Sorlisi was obliged to draw up his case, and submit it to the ecclesiastical consistory of Leipsic; the answer of the consistory was favourable and very fair, though founded on a curious casuistical distinction. It was stated that the Count's impotence was not of such a nature as to prevent the generative *act*, but only the *effect: non quidem talem impotentiam et inhabilitatem quæ generationis actum, ut scholastici loquuntur, sed generationis effectum tantum impedit.*

After considerable delay, the marriage was at length permitted to be privately performed. But the matter was by no means suffered here to rest. The supreme ecclesiastical consistory, which had hitherto taken no cognizance of the case, interposed, and demanded that the parties should be separated. Madame de Sorlisi, too, who protested that she would rather die than forsake her husband, was interdicted the sacrament.

The various theological faculties of Germany were now consulted; and nothing could exceed the zeal of those learned bodies in dissecting and discussing all the various distinctions that could be made out respecting the case. It would seem, indeed, that to counteract the practice of vice, they had thought it necessary to be completely masters of every vice in speculation.

The faculty of Hasse-Giessen were for dissolving the union immediately, for the lady's sake: for they thought that she must be tormented excessively by her husband, whom they compared, in the language of St. Basil, to a bull with his horns cut off, *instar bovis cui cornua sunt abscissa, imaginem impetus facere, incredibilem vesaniam spirando,*

The faculty of Strasburg held that so damnable a connexion could not be tolerated, approved, or defended: they said that the lady, in desiring to live with her husband, committed a mortal sin; and finally exclaimed, that if the young couple did not consent to separate, they ought to be banished from a land of piety.

In the faculty of Jena the matter was discussed with more mildness. They thought, however, that Sorlisi should rather have married some old woman, as it was only society he could have wanted; and they, therefore, were of opinion, that a separation should take place.

The Königsberg faculty thought that some regard should be paid to the contentment of the lady, and that the parties should be allowed to remain together. On the same principle, the faculty of Greifswald opined that, as the lady had got into the scrape with her eyes open, she should abide by the consequences, though it did not seem to them to amount to a mortal transgression.

There were, besides these thundering bodies, several individual skirmishers in the field. A Dr. Bulæus took part with Sorlisi, and showed that there was nothing so very scandalous and alarming in the marriage. He censured the scandal that arose out of the discussions which had taken place, and proved on the whole, that excepting the certain prospect of sterility, there was nothing to be complained of, while many other matches, equally objectionable in that respect, were often formed between persons of very unequal ages.

But others maintained in round terms, that it was a match brought about by the Devil himself; that it was absurd to give more credit to the fancies of a raw girl than to the grave opinions of a host of bearded divines; and one advised that the lovers, instead of being allowed to marry, should have been *cudgelled* out of their mutual affection. This last polemic literally called out for clubs; "*ad baculum, ad baculum, quo pruritum extinguite!*"

To conclude this chequered history, the Consistory of Leipsic, in May 1668, two years after the commencement of the proceedings just detailed, formally declared that the marriage ought to be tolerated, and the parties freed from further annoyance. The Elector, however, appended a clause to this decision, that the case was not to be made a precedent, and that no future indulgence of the same kind should be permitted.

I shall only add that this narrative was the one on which Sterne so wittily founded Uncle Toby's wound in the groin, and the consequent doubts of Widow Wadman. But independently of this, the distresses of the Abelard and Heloise of Germany

seemed deserving of being better known, especially as they constitute a decidedly medico-legal case.

2. *Moral Causes.*

It happens not unfrequently that although there be no external defect of structure, still the individual is really impotent. In such circumstances, however, the inability is generally functional and temporary. The case has often been quoted, which John Hunter relates in his treatise on the Venereal. A gentleman consulted him, complaining of absolute inability to have sexual intercourse; upon which the sagacious surgeon, suspecting the cause, as there was no apparent physical reason for impotence, made him promise upon his honour to pass six nights with a young woman, without attempting to have any connexion with her, however strong might be his desire. The spell was broken, the current of the patient's thoughts being changed: instead of anxiety about his supposed impotence, he soon began to apprehend that he could not restrain himself so as to keep his word of honour passed to Mr. Hunter; and such proved to be the case.

Fascination, fear, and other affections. — In times of superstition, such a state of impotence was always sure to be attributed to the influence of magic; and you will see in Montaigne what a remarkable cure that acute essayist effected on a friend of his, by supplying him with a pretended counter-charm. Cases also have often been met with, in which the doubt of impotence has led to the fact, and the unfortunate dupes of their own suspicions have sought a termination of their distresses in suicide. On the other hand, excessive desire is a frequent cause of inability; but it seldom lasts long, and can prove but a temporary impediment.

Habits and modes of living.—Certain habits, such as frequent intoxication, and vicious indulgences of various kinds, often produce such a want of nervous energy, and so debilitating an effect on both mind and body, as to render the individual incapable of exercising the generative function. Strong narcotics, also, such as opium and tobacco, and according to some—Metzger among the number—coffee, when taken immoderately, are said to have the same effect. An odd story is told by Murray, in his *Apparatus Medicaminum*, of one of the wives of the Sultan Mahmud, who, on looking out of her window one day, saw some grooms proceeding to castrate a fine horse: she called aloud to them to forbear, and to give the animal *coffee*, for she had observed the effects of that beverage upon her husband! Camphor also was long believed to possess anaphrodisiac qualities, or, as the verse has it,—

"Camphora per nares castrat odore mares."

Sir Thomas Browne combats this notion as a vulgar error.

Partial impotence.—It is a well-known fact that men may become impotent with regard to particular females, while with others they possess their full powers. The law recognises such a form of inability, which it terms *impotentia quoad hanc*, and a divorce was granted in the Earl of Essex's case on this ground, Lady Essex charging his Lordship with impotence, and he confessing himself so with regard to her. Some other curious particulars connected with this case I shall hereafter have to notice.

The impotence *quoad hanc*, can, in general, be accounted for; and will probably be found in most cases to arise from one or more of the bad qualities summed up by Baumer as the extinguishers of affection—*Morositas, contemptus, iræ, tristitia, corporis immundicies ac fœtor, venerem primario supprimunt.*

A very singular case was published at Venice, in the year 1815, and was much discussed in the German journals soon after. It was a marriage which was dissolved the day after it was celebrated. The bride, a lady of 27, much admired for her beauty, was most unexpectedly found to have her person covered from the breast to the knees with a profusion of black, thick, and bristly hair: she was, in fact, compared to a black poodle in those parts: and it was held to be a sufficient ground of divorce.

A remarkable blunder, which had well nigh been attended with serious consequences, was once committed in our ecclesiastical courts, by the authorities there pronouncing too absolutely in a question of impotence. This was in the case of one Bury, who was divorced a *vinculo matrimonii* for frigidity or "perpetual impotency of generation." He afterwards married another wife, and had children by her; upon which it was urged that the church having been evidently deceived, the divorce thereupon was null; and if so, that the second marriage was unlawful, and the issue illegitimate. But the courts of common law decided, that since there had been a divorce for impotence, it was clear that each party might lawfully marry again; and though it should be allowed that by reason of the error of the church, the second marriage was voidable, yet till it were actually made void, it remained a marriage, and the issue were to be deemed unlawful.

Similar cases have occurred on the continent, and have led to much casuistical discussion,—perhaps also to some scandal.

A grand controversy was, whether a man, who had been divorced for impotence through sorcery, and had married again and had children, might, on the death of the second wife, be claimed by the first? The canonists thundered against each other, as they took different sides of the question. In truth, ever since Sanchez wrote his great work, *de Matrimonio*, the discussion of all possible cases in which capability may exist at one time and impotence at another, has been a favourite occupation of the casuists; and it is said that some of their refined hypotheses never entered into the imagination of any other people in the world, than themselves.

CASES OF POISONING

BY

OPIUM, AND BY BELLADONNA.

To the Editor of the Medical Gazette.

Sir,

Two cases of poisoning by laudanum having recently been brought to St. Thomas's Hospital within twenty-four hours of each other, and as the parties were nearly equal in age, and similar in physical power, while the quantity of the opiate they had taken, and also the time that elapsed before they were submitted to medical treatment, was almost precisely the same, it was thought that so fair an opportunity for determining the effects of bleeding in these cases ought not to be neglected. The cases, therefore, were treated alike in every respect, with the exception that one was bled, while in the other that operation was omitted. From the narration of the cases, it will be seen that the latter recovered in a much shorter time, and with fewer distressing symptoms, than the former; a fact which, although it might have been predicated from the known laws of poisons, remained still to be proved by experiment; and as the cases in this point of view are important, I shall feel obliged by your giving them insertion in your valuable journal.

I inclose also a case of poisoning by belladonna, in which the little patient was bled; but it will be seen that after the bleeding her recovery was very doubtful, and that the symptoms were so imminent, that I should hesitate in having recourse to that operation in any similar case.—I am, sir,

Your obedient servant,

Henry Bullock.

St. Thomas's Hospital,
Nov. 14, 1836.

Case I.—*Poisoning by Opium.*

Sarah Todd, 21 years of age, and of robust health, was brought into St. Thomas's Hospital at four o'clock in the afternoon of Wednesday, Oct. 5, 1836, having taken an ounce of laudanum two hours previously.

It was stated, that half an hour after she had drunk it she complained of sickness and of excessive thirst; that at length she became drowsy, and ultimately insensible. On being taken to the ward she lay comatose, with her pupils contracted and insensible to light, her countenance livid, her respiration slow, almost imperceptible; the surface of her body cold, and her pulse slow and feeble; and what was remarkable, was the great relaxation of the muscular system.

Her stomach was immediately emptied by means of the stomach-pump, and then washed out by the repeated injection of large quantities of warm water. An emetic dose of the sulphate of zinc was next given, which excited vomiting several times. She was then made to walk round the squares of the hospital, supported by two men, resting at intervals. At seven o'clock we were gratified by her becoming sensible, when she complained of headache, of lassitude, and of drowsiness. Twelve o'clock arrived, and as the symptoms remained much the same, she was bled to twelve ounces, and a mustard cataplasm applied to the stomach, which had no sooner drawn, than the same forced activity was directed to be continued, while lemon-juice and strong coffee were administered at short intervals. The patient was in this manner kept moving for twelve hours, when all the symptoms of poisoning having subsided, I allowed her to go to bed, with mustard cataplasms placed on her feet as a precautionary measure.

On Thursday she had some refreshing sleep, but as late as Friday she complained of headache, was feverish, and her tongue was dry, while the pupil was but slightly acted upon by light. On Saturday, however, the symptoms con-

siderably abated, so that on Monday she left the hospital quite well.

CASE II.—*Poisoning by Opium.*

Jane Morgan, 20 years of age, a strong and equally healthy person with Sarah Todd, in a fit of jealousy, took an ounce of laudanum at 11 o'clock on Thursday morning, October 6th, 1836. About an hour and three quarters afterwards she was brought to the hospital, when it was stated that almost immediately after having taken the opium, she complained of headache, but subsequently she fell into a stupor, and at the time I saw her, she was completely insensible and comatose, with her eyes fixed, the pupils contracted, and altogether unaffected by light; her breathing was also slow and stertorous, her pulse feeble, scarcely to be felt, the surface of the body cold, her countenance bloated, and no stimulus I could employ had any effect in arousing her. Without loss of time, I introduced the stomach-pump, evacuated the contents of the stomach, and cleansed it by means of repeated injections of warm water; copious vomiting was next produced by a solution of the sulphate of zinc, and this having subsided, she was, as in the former case, kept constantly moving, by the assistance of two men. At 8 o'clock she had become so far sensible as to recognize her friends, and to be able to speak, though still overpowered by sleep, and suffering intense headache: a mustard cataplasm was then applied to the epigastrium, and immediately afterwards directions were given to make her drink freely of strong coffee and acids, and to persevere with the same forced exercise. At 12 o'clock these means had been so far successful, that she was perfectly sensible; and as all the urgent symptoms, except severe headache, had disappeared, she was put to bed, and mustard poultices ordered to the feet. During the night she slept but little, and on Friday morning she expressed herself as being quite recovered. Certainly not a single distressing symptom remained, for even the iris acted well; she left the hospital, quite well, on Tuesday.

Many physicians have advocated the treatment by bleeding, and speak of its universal success. Formerly, within my own recollection, bleeding was the practice of this hospital; and I am informed, on good authority, that some years since, it was received as a general principle, and constantly acted upon. This doctrine, however, having been lately considered untenable, and at variance with all the known laws of the action of remedies upon the system, and bleeding consequently suspended, the results have been infinitely more successful, and the convalescence completed within a much shorter time.

I would not be understood to intimate that bleeding in all cases in which opium has been taken is prejudicial, or inadmissible, but as these cases singularly illustrate the great principle, that bleeding is not the rule of treatment when the system is under the influence of poison, I have thought that the publication of these might induce others to abandon, in similar instances, the use of the lancet, and to report the results.

Poisoning by Belladonna.

September 23, 1836. — Ann Forth, a girl nine years of age, was brought to St. Thomas's Hospital at night, by her parents, who stated that she had been poisoned by belladonna, having, in the evening, ate portions of the bark, and masticated the root of that plant. Two hours after, she was taken with a feeling of sickness, a loathing of food, a distressing sense of lassitude, and dryness of the throat. At nine o'clock, or four hours after the accident, delirium came on, which lasted about an hour, and was succeeded by an irregular convulsive action of the whole muscular system. About this period I saw her, when she was in a state of complete insensibility, approaching to coma; her face was distorted and pallid; her eyes protruded and suffused, the lids separated, the pupils fully dilated, and scarcely affected by the action of light; whilst there were frequent convulsions of the muscles of the face, as well as of the extremities, for the angles of the mouth were retracted and agitated; the lower jaw was alternately fixed and trembling. In addition to these striking phenomena, the surface of the body was cold and clammy, the pulse small, rapid, and intermittent, and she had sunk into a state of lethargy so absolute that it was impossible to rouse her. Assisted by my friend, Mr. Stone, of Christ's Hospital, the stomach-pump was immediately employed, warm water plentifully injected, and the contents of the stomach in this manner removed. This was no sooner

effected than an emetic dose of sulphate of zinc was injected into the stomach, and the treatment was so successful that the convulsions subsided previous to withdrawing the tube. Enemata of warm water were now administered, a mustard plaster applied to the nape of the neck, and I directed that she should be sharply shaken and be kept in constant motion about the squares of the hospital; lemon-juice and water being freely supplied her. By one o'clock, A.M., the child having frequently vomited, had decidedly less stupor; and although almost overpowered by the tendency to sleep, yet the iris acts perceptibly on the impression of light. The unfavourable symptoms were, her pulse continuing intermittent, though of more volume than before; the alvine evacuations and urine passing involuntarily.

4 A.M.—Has continued to improve, and attempts to answer questions; complains of headache, and of total blindness; pulse 112, regular, and stronger. The power of recognition having returned, she was now bled to six ounces, mustard cataplasms applied to the legs, and the same forced activity to be continued; for so imperative was the disposition to sleep, that, if allowed to remain quiet only for a minute she fell down in a profound sleep. At 8 A.M. she was quite sensible, able to walk alone, and her eye being less prominent, and the pupil sufficiently obedient to the action of light, the power of vision was restored, though she saw but dimly. As she had now been in a state of constant motion for fourteen hours, she was permitted to go to bed, with mustard plasters applied to the feet, and an aperient medicine. From this period to the time of her leaving the hospital, on the 8th of October, she gradually recovered; making occasional complaints of headache, soreness of the eyes, and intolerance of light; which, however, at length ceased.

ON THE NERVES WITHIN THE ORBIT.

To the Editor of the Medical Gazette.

SIR,

IN the communication by Mr. Thurnam of last week, he admonishes physiologists not to neglect the study of comparative anatomy; and after this salutary advice, proceeds, with much complacency, to state that a peculiar distribution of the nerves in the orbit of certain of our domestic animals, has been entirely overlooked by the modern writers who have treated of these nerves. Upon this ground he makes sundry reflections on the inconvenience of proposing theories which do not admit of general application, and even calls upon us to reject every explanation of the uses of the nerves in the orbit that has hitherto been started.

One would naturally conceive, that before coming forward with such sweeping denunciations of neglect and error, Mr. Thurnam would have taken some pains to become acquainted with the works of the authors whose opinions he criticises. The fact in comparative anatomy which he announces in this ostentatious manner, is the distribution of the sixth pair of nerves in quadrupeds to the conoid or retractor muscle—that muscle which, arising at the back of the orbit, embraces the optic nerve, and is attached to the posterior part of the eyeball. Mr. Thurnam informs us that one great authority on the nervous system, Willis (from whom we continue to take our nomenclature of the nerves), was familiarly acquainted with this distribution; but he asserts that the fact was completely lost sight of by subsequent anatomists and physiologists; and he claims some credit, it would appear, for having revived our knowledge on this point. One of the gentlemen whom he singles out in particular, as having been guilty of the negligence imputed to physiologists generally, is Sir Charles Bell; and from the short and positive manner in which he dismisses this author's reasonings on the nerves within the orbit, we should be led to conjecture that Mr. Thurnam had perused his works with the greatest attention. Now it may astonish your readers to learn, that although Sir Charles Bell's writings are thus held up to view as based on imperfect observations, they contain, nevertheless, an accurate statement of the fact to which so great importance is attached; and not only is the distribution in question conspicuously brought forward by the author, as harmonizing with his other views, in no less than two of his best-known works, viz. the "System of Anatomy" (vol. ii. p. 504),

and the "Nervous System" (p. 215), but to shew how he estimated the fact, it is made the foundation of an original theory, of which Mr. Thurnam proves himself entirely ignorant, to explain why the sixth nerve in man should supply the abducens muscle of the eye exclusively.

I may remark, in addition, that it is acknowledged by Sir Charles Bell that the observation was obtained by him from Willis, whose character as an accurate anatomist he takes the opportunity of praising in the highest terms.

It is not, I presume, expected that I should here enter into an explanation of the theory alluded to, as proposed by Sir Charles Bell, in connexion with this piece of anatomy. I have done enough in shewing that, contrary to Mr. Thurnam's representations, he has not altogether neglected the comparative anatomy of the eye. I might, indeed, prove, that so far from such being the case, he has gone further into the inquiries bearing upon this subject than was contemplated by this ingenious comparative anatomist himself. Let me ask, why has Mr. Thurnam never once alluded to the mechanism for protruding the third eye-lid, or how, in those animals that possess the retractor muscle, and to which the sixth pair is distrubuted? Does he know that quadrupeds have a third eye-lid? By neglecting this apparatus, nothing can be conceived more fanciful or absurd than the use which he has attributed to the retractor muscle; following, I ought to say, the authority of Willis. It may, perhaps, be quite just to recommend this old English anatomist for the accuracy of his anatomy; but it was scarcely to be expected that, in the present day, he would be readily accepted as an authority in physiology. What, then, is the opinion that Willis entertained of the proper function of the retractor muscle, and to which Mr. Thurnam gives his especial approbation? He considered that as this muscle is found in animals which feed with their heads hanging low, it was added for the sake of retaining the eye-ball securely in the socket—for preventing the globe of the eye slipping bolt out, when these animals were grazing; an accident which he supposed was likely to occur, even although this organ is held in its place, as we know, not only by means of the optic nerve, and the four strong recti muscles, but by the two eye-lids also, which could close upon the eye, and hold it in, if ever the necessity arose for preventing its dropping out*! In token of his admiration of this notable theory, Mr. Thurnam speaks always of this muscle as the "suspensory" muscle.

I have the honour to be,
Your obedient servant,
ALEXANDER SHAW.

Middlesex Hospital Medical School,
Nov. 14, 1836.

REMUNERATION OF MEDICAL WITNESSES.

To the Editor of the Medical Gazette.

SIR,

THE particulars of the accompanying medico-legal case were furnished to me by a friend, who acted as witness on the occasion. I have appended to it a few remarks on the remuneration of witnesses, which may possibly interest those of your readers who are engaged in the practice of medical jurisprudence.

I am, sir,
Your obedient servant,
ALFRED S. TAYLOR,
Lecturer on Med. Jur. and Chemistry in Guy's Hospital.

Nov. 14, 1836.

A coroner's inquest was held, a few months since, upon the body of a child, which was found under such circumstances as to lead to the suspicion that it had been murdered at its birth. There was no evidence to support the charge of infanticide against the mother; but there were reasons to believe that she had concealed the birth, and had thereby rendered herself indictable for a misdemeanor. The jury returned a verdict of "*found dead.*" The question of concealment being out of the jurisdiction of the Coroner, that functionary transmitted a copy of the depositions, taken before him, to a police magistrate. The different witnesses, including the gentleman who had ably conducted the medico-legal investigation, were subsequently examined by the magistrate,

* Observare est quod quadrupedes, qui oculos in terram pronos ac pendulos gerunt, musculum peculiarem habent, quo oculi globus suspenditur, et ne pondere suo extra ossis orbitam dilabi aptus sit, sustentatur.—*Willis.*

and were by him bound in the usual recognizances to prefer a bill of indictment against the prisoner at the sessions. The case was soon afterwards tried, and the prisoner was acquitted, some circumstantial points having been adduced in her favour.

On the medical witness applying to the court for remuneration for his trouble and loss of time, he was informed that it had no power to order payment of expenses in that particular misdemeanor. He was then referred to the act, 7 Geo. IV. c. 64. s. 23, which allows the payment of expenses to prosecutors and witnesses only in certain misdemeanors there enumerated: "concealment of birth" is not among them.

The injustice to which the witness was subjected in this case will appear more striking, when it is considered—that he had already conducted a troublesome investigation before the coroner, having inspected the body of the child, and performed the usual experiments to determine whether it had respired or not, for which, by 6 and 7 Will. IV. c. 89, s. 5, he being connected with a parochial infirmary, and the case being a parish case, could receive no remuration;—that he had afterwards to appear and confirm his evidence before the police magistrate, for which, even had the misdemeanor been one of those named in the statute 7 Geo. IV. c. 64, he could have received no fee, since sec. 23 positively forbids the payment of expenses and compensation to witnesses, for attendance before the examining magistrate;—and that subsequently, at a great sacrifice of time and personal convenience, he was compelled to attend and give evidence on the trial of the prisoner at the sessions, where he had to learn the existence of this *casus omissus* in the statute.

It appears to me that we have here an instance of defective legislation which must often press particularly hard upon members of the profession, and a grievance which ought, as a matter of common justice, to be speedily removed.

For the information of those practitioners who may not have the statute by them, it may be stated that the following are the misdemeanors for which alone the expenses of witnesses are allowed:—Assaults with intent to commit felony; attempts to commit felony; riots; misdemeanors for receiving stolen property, knowing the same to have been stolen; assaults upon peace officers in the execution of their duty, &c.; assaults committed in pursuance of any conspiracy to raise the rate of wages; knowingly and designedly obtaining property by false pretences; wilful and indecent exposure of the person; wilful and corrupt perjury; subornation of perjury. The only two cases in the above list which are likely to require professional testimony, are—assaults with intent to commit felony, and attempts to commit felony; and in these, it must be remembered, a witness is not entitled to any remuneration for the evidence which he may give before a magistrate. Besides, whatever trouble and inconvenience he may be exposed to, should the prosecutor remove the indictment by *certiorari* into the King's Bench, and the case be tried at Nisi Prius, he is not entitled under this statute to any fee even for his evidence at the trial of the prisoner*.

The refusal of his expenses to a medical witness attending before an examining magistrate to give evidence in a case of misdemeanor, is as much a matter of specific injustice, as it was formerly, in the case of his attendance before a coroner. The wilfully throwing of sulphuric acid or other corrosive substances, on the person, is, for example, a misdemeanor (in England) which might require as careful a chemical analysis, on the part of a practitioner, before a prisoner could be committed by a magistrate, as any case of fatal poisoning falling under the jurisdiction of a coroner. On what principle, therefore, does this statute prohibit the payment of expenses to witnesses, without any reservation in favour of those whose time is so often, in other ways, gratuitously sacrificed to the public good? There are other misdemeanors, altogether omitted by this statute, in which, as in the case of "concealment of birth," a practitioner must give his professional testimony before a magistrate, and at the sessions, without, in either case, receiving any fee or remuneration whatever.

In charges of felony before a magistrate, a medical witness is, by sec. 22, entitled to his expenses for attendance at the examination, provided he obtains a certificate from the magistrate before

* Rex *v.* Johnson, R. and M. 173; Archbold's Crim. Pleading, 140.

the trial; but the granting of this certificate is left optional with the magistrate. Here is a very singular legal distinction. To the medical practitioner it can matter but little whether the crime of which the prisoner, against whom he appears, is accused, be a felony or a misdemeanor: the sacrifice of time on his part, and the knowledge required for conducting the medico-legal investigation, will be much the same in the two cases. Indeed, the attendance before a magistrate in a misdemeanor, may often give rise to more trouble than in felony; and yet the law decrees remuneration to the witness, not according to the trouble incurred, but according to the degree of crime of which a prisoner may have been guilty!

It would be occupying too much of your valuable space to pursue this subject further; but I think these observations will suffice to show that some additional legal provisions ought to be made, to remove what must be regarded as an oppressive evil.

ON THE

USES AND ABUSES OF ALOES.

To the Editor of the Medical Gazette.

Sir,

When you can afford space in your excellent journal, I shall feel obliged by your admitting the following observations on the use and abuse of aloes.

I remain, sir,
Your obedient servant,
Edward Greenhow, M.D.

North Shields, Nov. 8, 1836.

There is no substance which enters so largely into the composition of aperient medicines, as aloes, and none, perhaps, for which we should find it so difficult to procure a substitute, the dose required being so minute, that it is readily administered in a small bulk; and its action being confined to the large intestines, little or no derangement of the alimentary canal is occasioned by its operation: such at least is the case when used with discretion; but I am prepared to shew that great and serious mischief often results from the inordinate, or too long-continued use of aloes, more particularly when taken habitually, as has become too commonly the case, without the knowledge or supervision of a medical man, the non-medical part of the community being little aware that any ill effects can attend the use of a remedy so universally employed.

Medical writers describe aloes to be a stimulating cathartic bitter, which is said to act by increasing the muscular or peristaltic action of the intestines; but it evidently acts also by irritating the mucous membrane of the intestines, and producing a larger secretion; this is manifest from the large quantity of mucus often passed with the evacuations when aloetic aperients have been exhibited. Authors differ considerably as to the doses which ought to be given; Lewis mentions ʒss., or ϑij., when we wish to purge effectually: "at the same time," he says, "it occasions commonly great irritation about the anus, and sometimes a discharge of blood;" he then goes on to say, "in smaller doses, as ten or twelve grains repeated once or twice a day, it not only unloads the first passages, but attenuates and dissolves viscid humours in the remote parts, warms the habit, quickens the circulation, and promotes the menstrual and hæmorrhoidal fluxes: its continued use renders the blood sensibly more fluid, as appears on venesection. Cullen says, it empties the great intestines, and it is remarkable it does this in a very small dose. I have known innumerable instances of persons who very constantly obtained this effect from one or two grains of aloes. Paris states the dose to be from five to fifteen grains, and says, no greater effect is produced by a large dose, than by one comparatively moderate. Brande states the dose to be from two to ten or fifteen grains. Percira says, "taken internally in small doses, aloes acts as a tonic to the alimentary canal, assisting the digestive process, strengthening the muscular fibres, and promoting the secretions, especially that of the liver, which organ it is thought specifically to influence: in large doses it acts as a purgative." I will now detail the result of my own observations during several years, in a great number of cases, in which aloes was given in every variety of dose; and I have almost uniformly found that very small doses have answered all the purposes to be obtained by its use, viz. substantial feculent evacuations, attended by little or no irritation; and for this

purpose from two to five grains will be found sufficient: when administered in larger doses, it is apt to occasion griping, heat about the anus, and, if long continued, hæmorrhoids; it also loses its effect of properly emptying the large intestines, producing frequent small evacuations, consisting principally of mucus, and attended with tenesmus, the abdomen being at the same time distended and tender, the patient complaining that "his bowels feel as if scraped;" the pulse is sensibly quickened, and a sense of constriction is felt about the head.

The long-continued use of aloetic aperients has a tendency to produce emaciation, and their action upon the bowels becomes capricious and uncertain, sometimes failing to produce any effect, and at others producing frequent small evacuations, as before described; the mucus being occasionally passed in long membranous bands, and sometimes in substances resembling pieces of flesh. I have also seen two cases, in which the mucus passed along with the evacuations had all the appearance of fat. It is not difficult to conceive that such a state of irritation, kept up for any length of time, or frequently recurring, must ultimately tend to some organic change of structure; and I think it highly probable that stricture in the rectum may sometimes have its origin in this source; and I have seen cases of enteritis which I believed to be traceable to the inordinate use of aloes.

It appears probable that aloes does not undergo any change or solution in passing through the alimentary canal, but that it becomes intimately blended with the dejecta; and when these are detained in the colon and rectum, that its stimulating effects are felt, causing these viscera to expel their contents, the unloading of which may give rise to a freer flow of bile. Aloes is undoubtedly useful as an emmenagogue; and, in combination with iron, is perhaps more to be relied upon than any other remedy. It is more difficult to account for its possessing any power over the action of the kidneys, yet such, I am convinced, is the case. I have many times found that when squill, along with other diuretics, failed to act, the addition of aloes has speedily produced a copious diuresis.

When aloes is given simply as an aperient, the best vehicle is some vegetable extract, as gentian, or chamomile. Soap is objectionable, as impairing its purgative powers; so also do the aromatic oils to a certain extent; and alkalies are said to have a similar tendency. One or two grains of ipecacuanha combined with each dose of aloes, has the effect of diminishing, or often of altogether removing, its irritating effect upon the anus; and many persons labouring under piles are not only able to take it in this way with impunity, but with advantage.

When aloes produces griping, it may generally be remedied by the addition of a few grains of henbane extract, or extract of hops: the latter will be found preferable in most cases of dyspepsia. The effect of aloes is increased by comminution; therefore great pains should be taken in its preparation. Mastich is sometimes ordered in combination with it; I believe principally with a view to a more minute division of its particles. When aloes is combined with opium, its purgative properties are not generally lost, but only delayed, which makes it a valuable medicine to give in conjunction with that drug.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Facts and Cases in Obstetric Medicine; with Observations on some of the more important Diseases incidental to Females. By J. T. INGLEBY, M.R.C.S L. Senior Surgeon to the General Dispensary, Surgeon to the Magdalen Asylum, and Lecturer on Midwifery at the Royal School of Medicine, Birmingham. 8vo. pp. 206. Longman and Co.

WE hail with pleasure the publication of practical works like this, for they denote a degree of intelligence and activity among our provincial brethren which deserves every encouragement.

Mr. Ingleby is a gentleman who has read, seen, and thought much, and who, to unwearied industry, has added the greatest ardour in the pursuit of professional knowledge. The present work consists of seven sections, a portion of which has already appeared in an es-

teemed periodical. They are all on practical subjects of much interest.

Section 1. *On Puerperal Convulsions.*—This is full of valuable matter: the only point about it which we regret, is the great want of clear and simple arrangement. The materials are excellent; they could scarcely be better; but they are spread out before us with so little attempt at classification as to render the subject much more obscure than it otherwise would be. The author mentions the arrangement made by Dr. Dewees, into three classes,—viz. the epileptic, the apoplectic, and the hysterical convulsions; and very properly adds the anæmic, as also the tetanic forms of puerperal convulsions. This latter form was described by Professor Naegele, many years before M. Velpeau had noticed it; also by Wigand. We could have wished to have seen these different forms discussed under separate heads; the distinctions would then have been more marked, and much more available to the student. The cases at the end of the section, individually, are excellent; they are described with clearness and precision, the practice is judicious and good; but collectively they are liable to the same objection of want of good arrangement. They are classed according to when they occurred—viz. firstly, those cases which took place during pregnancy and previous to labour; secondly, those previous to labour and terminating in delivery; thirdly, during the dilatation of the os uteri; fourthly, after the full dilatation of the os uteri; fifthly, after the birth of the child, and before the expulsion of the placenta; sixthly, after delivery. We cannot approve of this arrangement, because the treatment cannot be guided by the period at which the convulsions occur, but by the character of the attack.

Sect. 2.—*On Malposition of the Uterus, Ovaria, Bladder, and Urethra, both in the impregnated and unimpregnated state, in connexion with retention of Urine.*

The observations on retroversion of the uterus, and prolapsus vesicæ, are especially valuable and practical, and are illustrated by well-reported cases of much interest; those on prolapsus vesicæ during the latter months are well worthy the attention of practitioners.

Sect. 3.—*On Obstructions in the Soft Parts to Progress of Labour.*

Some instructive cases are given of tumefied labia, from varicose veins or extravasation of blood into the labial tissues. In a case of the latter kind, which the author describes, the tumor burst, and nearly a pint of coagula was removed by a pair of dressing forceps, through a laceration at the edge of the vagina. This affection does not occur frequently, and its extent is seldom so great as to become serious, as it rarely passes beyond the margin of the labium; even this, however, may become enormously tumefied, and where it bursts before the head has approached the os externum, may give rise to profuse hæmorrhage. This will cease, or at least be in great measure diminished, during the passage of the child; and if it returns afterwards to any extent, must be controlled by cold astringents, and other appropriate remedies. In some rare cases, the extravasation of blood into the cellular tissue has proceeded to an enormous extent, implicating the nates, and even the hips, in the swelling. The plan of puncturing the tumor, which Mr. Ingleby has found unsuccessful, is not adapted to all cases; and we are rather inclined to think that the opening which he made was not of sufficient depth and extent. Extravasations of this kind do not merely retard labour by the obstruction which they produce at the external opening, but also by the effect which they appear to have upon the pains: these not unfrequently cease as soon as the extravasation takes place, leaving the patient in a state of serious exhaustion.

Œdematous labia, especially where accompanied with anasarcous tendency, may retard labour when the swelling is very large: the danger will chiefly depend upon the patient's general health. The author has recommended puncturing them with a fine curved needle, by which a load of serum is drained off, and much relief obtained. If labour be already commenced, we have scarcely any other means of relief in our power; but when the patient has still some days to go, warm stimulant fomentations will prove of great service. The *species aromaticæ* of the Prussian and other pharmacopœias soaked in some hot wine, will, in many cases, speedily remove the tumor. A simple imitation of this is a hot poultice of chamomile-

flowers, sprinkled over with a little red wine.

Mr. Ingleby's observations on the great value of active blood-letting in cases of contracted vagina from cicatrices, the results of former injuries, are practical and good; but why is the name of Dewees omitted? an author whose remarks on this subject are of the first-rate merit. Our limits will not permit us to go into the details of this section; we will merely make a short quotation from the author's observations under the head of vaginal tumors; the rest we strongly recommend to the attentive perusal of our readers, especially those who are in actual practice.

"There are two forms of ovarian tumors which obstruct the passage of the child. In the one, a small cyst, in connexion with a very bulky cyst, or else a portion of a large cyst, passes into the recto-vaginal septum, and bulges through the posterior part of the vagina. In the other, and that which occurs by far the most frequently, the whole ovary moderately enlarged prolapses within the septum. The descent is peculiarly liable to happen at two periods; the first near the end of gestation, the second during labour, the prolapsus being promoted by the relaxation of the soft parts." (p. 119). An admirable case, among others, is given by Mr. William Birch, of Barton, where the tumor was punctured. The question of puncturing these tumors is ably discussed by Mr. Ingleby, and well worthy of attention.

We pass on to

SECT. 5. — *On the Laceration of the Uterus and Vagina.*

Among other interesting points, the author notices the fact, that rupture occurs more frequently in multiparæ than in primiparæ—a circumstance which would at the first view be scarcely expected, had it not been fully established by long experience. His observations on the situation and course of the laceration deserve attention. "With a single exception, the cervix uteri has been more or less lacerated in every instance which I have seen, the rent being oblique in its direction, rather than longitudinal, extending to the body and side of the organ. The transverse direction has been erroneously represented as occurring most frequently, but of this I have only seen a single case, the rent being confined to the fundus, and the result accidental." (p. 185). In case of rupture of the uterus, where the fœtus has escaped into the abdominal cavity, and where delivery per vaginam becomes impossible, either from the contracted state of the wound, or the firm closure of the os uteri, the author proposes the important question, whether gastrotomy be justifiable.

We agree with the author in considering gastrotomy less dangerous than the Cæsarean operation; and the success which has lately attended this latter operation would strongly tend to support Mr. Ingleby's views. Ten cases of rupture are recorded, four of which are peculiarly interesting—viz. Nos. 6 and 7 terminated successfully. In No. 9, the uterus was ruptured at the eighth month, by the patient falling upon a step; the child escaped into the abdomen, and she died undelivered. We feel strongly inclined to agree with his opinion, that gastrotomy was indicated.

No. 10 is one of those rare cases where merely the peritoneal covering of the uterus was lacerated. "A great number of lacerations were discovered on the posterior surface of the uterus, the largest being upwards of four inches in length and nearly three in breadth; the flap hanging down, and exposing the fibrous structure."

The 6th Section, "*On Inversion of the Uterus*," is short, but one of much interest. Inversion is a displacement of very rare occurrence, but Mr. Ingleby has nevertheless had the opportunity of observing several cases. We agree with the author in considering that "the case of this displacement implies the existence of softening and enlargement," but we do not understand him when he considers that a portion of the placenta left attached to the uterus will cause its inversion.

The four degrees of inversion which are described by the French authors, are very properly discarded, as useless and unpractical: we regret, however, that he has not mentioned the division commonly followed—viz. into partial and complete. Dewees's excellent observations we could have wished to have seen noticed—White's also.

In a note to page 224, Mr. Ingleby says, "Candour induces me to confess having once excised a polypus for the inverted uterus." We do not make this quotation to show where an error in practice has been made, but to express

our high respect for an author who has had the manliness and honesty to avow openly where he has erred. The careful record of an unsuccessful case, in the hands of an experienced and talented practitioner, is worth a dozen successful ones: it points out the difficulties and dangers which we have to encounter, and, by its instructive example, warns us to avoid them. It is candour of this sort which distinguished the celebrated La Motte, more than a hundred years ago — that "*homo sincerrimus*," as Haller called him; it is the same honourable feeling which has characterized the incstimable records of our own admirable Smellie. Mr. Ingleby has followed an excellent precedent—would that others did the same!

It is of the greatest importance to reduce an inversion as quickly as possible after its occurrence. When done immediately, the reduction is generally effected with the greatest ease; in proof of which we may mention a case where an intelligent midwife recognized inversion to have taken place, and instantly returned it: after a short time, whether from coughing or some other cause, the fundus was again forced down, and she again succeeded in replacing it. It has, however, been too generally supposed, that, if not seen within two or three hours after the accident, the chances of reposition would be very small. Mr. Ingleby has given an excellent case, where he succeeded in replacing the uterus on the eighth day after labour, at which time the inversion took place, and where the patient appeared moribund. Boyer has recorded two extraordinary cases of inversion, which had resisted all the ordinary means of reduction, and which were accidentally but permanently cured by a sudden and violent fall on the nates. The one occurred to a practitioner named Barre, after lasting fourteen days; the other to Baudelocque, after a period of eight years.

Of the seventh and last Section we must say but little; not from want of interest, but want of room. It is entitled, "*On the Signs and Symptoms of Pregnancy; their obscure and deceptive Characters, their Complication with Disease, and the Signs which denote the Extinction of Life in the Fœtus.*" Sixty pages of valuable matter are here collected, on one of the most important subjects of diagnosis. We cannot agree with the author, in his note to page 240, in considering the plan of bringing down one foot of the child, in turning, as due to Mr. Radford, of Manchester: this was pointed out more than a century ago, but has not, we think, received the sanction of high obstetric authorities. We ourselves advocated this plan at one time, thinking that as the presentation now bore a greater resemblance to that of the nates, the chances of the child being born alive would be so much greater. Our experience has not confirmed this view: by bringing down only one foot, the hips of the child do not enter the brim of the pelvis so equally and readily; and our practice has been more successful since we have made a point of bringing down both feet: compelling the body of the child to move slowly and gradually through the os externum, has generally ensured a sufficient dilatation of the soft parts for the safe and speedy expulsion of the head. This last Section teems with practical matter, as indeed the whole work does. We take leave of Mr. Ingleby with feelings of high respect for his industry, talents, and great experience: we look upon the work as one of great merit, and cordially recommend it to the attention of the profession.

An Account of the most frequented Watering Places on the Continent, and of the Medicinal Application of their Mineral Springs; with Tables of Analyses, and an Appendix on English Mineral Waters. By Edwin Lee, Esq., M.R.C.S., &c. &c.

This constitutes by far the best account to which the English invalid or physician can turn for information regarding the continental watering places. Sir Francis Head's amusing "Bubbles from the Brünnen" has tended to make this kind of narrative more anxiously sought after, although even now the efficacy of mineral springs is much less estimated in this country than it is abroad. Mr. Lee has visited most of the watering places on the Continent, and viewed their several peculiarities with an inquiring and intelligent eye. He remarks upon the vagueness of the general direction so often given to invalids, to try a course of "some of the continental waters," and the impossibility of rectifying this when abroad, as the practitioners at all and each of the places

which may be visited fail not to laud their own waters as of sovereign efficacy in the particular complaint, be it what it may, under which the applicant happens to labour. Some good illustrations are given, to prove that the benefit so frequently derived from a visit to some favourite spring or bath, is not to be attributed so entirely as many imagine, to the change of scene and recreation attending the employment. And among other arguments used by Mr. Lee, is the occasional instinctive preference for the particular waters displayed by the lower animals. Thus, Alibert says, "It is a known fact that at Vichy, in the month of April, the period when the snow melts on the mountains, when the wind has passed over the springs from the direction of Puy de Dome, and has carried the vapour to distances more or less considerable, the ruminating animals on the left bank of the Allier swim across the river to come and drink with avidity at the springs of the establishment: the waters are then fit for use, and the people of the country are in the habit of saying the season has commenced, the beasts have passed across—*les bêtes ont passés*."

The above anecdote will probably bring to the minds of our readers the legend of Bladud, who was led by his swine to the discovery of the springs at Bath.

Mineral springs owe their impregnation either to fixed or volatile ingredients, and some of the most celebrated yield but a very small portion of solid matter on being subjected to analyses. Thus Wildbad yields only 1 gr. in sixteen ounces of water, Gastein $1\frac{1}{2}$ gr., and Pfeffers $2\frac{3}{4}$ grs., while on the other hand Pullna yields as much as 182 grs., Saydschutz 160 grs., and Seidlitz 126 grs. In some the gaseous parts are merely suspended in the water, and consequently escape very rapidly after it is drawn. This occurs at Hartfell, Cheltenham, and Tunbridge, where, as at Seltzer, Pyrmont, Spa, and some others, the gaseous constituents are intimately blended with the fluid. This accounts for the great difference in the degree to which various waters are affected by exportation.

It is obvious that mineral waters are sometimes of the alterative class. Their action is chiefly evinced by increase of the secretionary functions, and it is asserted that more benefit is often derived from them when their effects are insensible at the time. Nay, Dr. Kreyrig informs us that a cure is not unfrequently preceded by augmented indisposition, the excretions being diminished, the face becoming flushed, the pulse strong, and the sleep disturbed. After a fortnight or three weeks, a crisis supervenes, generally in the shape of purging, which is followed by immediate relief.

For the history of particular Springs, we must refer to the work itself, which, embracing an account of the chief watering places, both at home and abroad, will be found a useful manual, either by the physician, or the invalid travelling for his health.

MEDICAL GAZETTE.

Saturday, November 19, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL WITNESSES' BILL.

LEGISLATION EXTRAORDINARY.

THE representative of Finsbury has, ere this, we fancy, found out that it is one thing to push a short bill through its stages so as to have it made a law, and another to make that law work. It may happen that the object of the law is ridiculous and absurd—as when some one got a bill passed to prevent the cry of "sweep:" or the object may be good—yet, through the ignorance of the party that fathers the bill, its provisions may be of such a nature as to be almost impracticable. In either case the measure which may seem to have obtained the sanction of parliament, generally proves abortive, and oftentimes mischievous.

The latter has been the case with Wakley's act, which coroners and overseers either persist in knowing nothing about, or amuse themselves in laughing at: while so far as it has been attempted hitherto to bring it into operation, it has only been productive of annoyance and mischief to the profession.

We had long suspected that this

would be the result: for we never dream of procuring good liquor out of foul vessels. We saw the inconvenience of the patronage obtruded on the profession: and though we acknowledged fully the desirableness of having some legislative protection for medical men in the matter of attending and giving evidence at inquests, we had more than mere misgivings that simple as was that object, it could not be attained under the more than questionable auspices of our *honourable* contemporary.

When the act was passed, however, we were unwilling to mar it by any hostility of ours. Nay, our love of fair dealing induced us to offer the tribute of a compliment to the Finsbury member: for, to do him justice, he worked very assiduously to get the thing shoved through—his only hope—the only little progeny which he could manage to have born alive, after all his legislatorial exertions. The intention seemed good, however ridiculous the means of carrying it into effect. But the ricketty brat proves very unmanageable—a nuisance that must be abated: and if some method cannot be speedily devised to counteract its tendency to mischief, a summary step towards its absolute suppression must be adopted.

It is amusing to observe the anxious parent endeavouring to make excuses for the stubbornness of his bantling. Week after week we find him attempting to pacify those who have been deceived and disappointed in their expectations. What a blessing to have a law-maker, and an expounder of the law, in one and the same person!

One complains that he had been cheated into an attendance, and that when, on giving his evidence, he asked for his fee, the Coroner only mocked him: he had not had a *special* summons. This, of course, is not Mr. Wakley's fault, for the witness should have taken care to have been "*specially*" summoned,—as if the witness dare be absent on receiving an ordinary summons! Come, come, our *honourable* friend, no mystification! The Coroner, maugre your bill, has just as much power as ever he had, to compel any medical man to attend his court: the new arrangement only giving him and the jury a discretion, when it so pleaseth, to issue a special invitation. But what if he or they won't exercise this discretion? "Why," says the Finsbury legislator (or ought to say, if he would only speak out)—"if they won't, they won't; and I can't compel them." He insinuates, however, that he has a great mind to try and remedy this part of the bill next session, by rendering it imperative on the Coroner to summon medical witnesses *specially* in every case. No, no, Mr. Wakley, be honest, and confess that you mean no such thing. Let by-gones be by-gones. You were fortunate enough, in getting your bill through, such as it proves to be; and you will never attempt to add a rider to it, or you are a greater fool than we think you. You know that you have no more chance of carrying such a clause in the House of Commons, than you have of being able to set the Thames on fire. Your attempt to control the powers of the Coroner would be as abortive, as when you endeavoured to become a Coroner yourself!

But hear the expounder on another point. The act provides the munificent fee of two guineas for the attendance and trouble of a witness, specially summoned, and who performs a *post-mortem* examination, with or without a chemical analysis of the contents of the stomach. This is expressly so stated in the statute. A witness, however, inquires of the learned legislator—whether, having received two orders from the Coroner, one for simple attendance, and the other for

the performance of a *post-mortem* examination, he could demand three guineas instead of two? Oh! says Mr. Wakley, to be sure you *ought* to receive three, and the Coroner would be "justified" in awarding it to you. "If (says he) a chemical analysis were instituted, and occupied much time, the coroner would be *justified* in making an order for the payment of *three* guineas; although, if the order were resisted, payment of only two guineas could be enforced against the overseers by a court of law!!!"

Here is a precious legislator and expounder of the law for us! The coroner "justified" in sending the medical witness on a fool's errand, to ask for three guineas, when the act only entitles him to two, and even that cannot be obtained without going to law! What a notion the *honourable* member has of justification! but it is well to know what we are to understand when he tells us he conceives himself *justified* in any of his various sayings and doings.

Medical men now begin to feel what they have gained by Wakley's meddling in legislating for them. The act tells them they have a *chance* of a coroner's order, which may or may not chance to be honoured by the overseers. Both coroner and overseers have declined recognizing the act hitherto; and we believe there has been, as yet, not a single instance of a medical witness receiving any remuneration in consequence of the provisions of the measure. Furthermore, the ends of public justice are frustrated; for never have inquests been conducted in so negligent a manner as since the passing of this bungling bill; the coroner and his jury choosing, in many instances, rather to dispense altogether with medical attendance, than to draw orders which they know will be dishonoured. Yet Wakley says they would be "justified" in ordering even beyond the legal claim!

But if such be the fruits of the actua operation of the measure, what bless ings are there not in store for all wh come within the reach of its influence "The enactments of the Medical Wit nesses' Bill," says the voice from Essex Street, (where, by the way, is the unfortunate 'Voice from the Commons?') "have rendered the duties of medical practitioners more arduous and imperative than ever; nor can they now be neglected without exposing to the risk of irretrievable ruin and professional degradation."

Thus, in brief, the matter stands, according to our profound legislator's own showing. *If a medical practitioner, on receiving the coroner's summons, refuse to attend, he will be fined five pounds; if he attend, he will have a* chance *of an order for two guineas, with a risk of ruin and degradation!*

We subjoin a letter from a respectable correspondent, who gives us his name and address. The hardship of which he complains is much to be deplored; but we see not what remedy he can have in the present wretched state of our medical legislation.

To the Editor of the Medical Gazette.

Sir,—May I request your opinion and advice on the subjoined affair:—

On the 3d of September, about 2 A.M. I was requested to see a man at ———, who had been run over by a stage-coach. When I arrived he was dead: of course an inquest was requisite. On the 5th, the person employed to summon the jury and witnesses called on me, to request my attendance at the inquest the next day; a distance of about four miles from my house. No written summons was given to me. I attended, at much inconvenience, the next day, at 11 A.M., and was examined. The jury having given their verdict, I requested an order from the coroner, on the churchwardens and overseers of the parish, for my fee; which, after considerable hesitation and numerous objections, I obtained. This order was presented to the acting overseer, who refused

to pay it until he had the sanction of the auditor for the Union, adding, that he would submit it to the Board of Guardians in a few days. Yesterday, after two months, on inquiry, he informs me that the Board says it is the first case of the kind which has come before them, that they are not aware of such an act having passed, and must therefore decline paying it. I requested the Coroner's order to be returned to me, which was done. This, in the shortest manner, is the case, and I wish to know whether you think the fact of my not having received a written summons from the Coroner materially affects the case, as I have received the Coroner's order for the fee. If it does not, how can I proceed against these functionaries?

I trust you will pardon my trespassing on you, but I feel with you, sir, that it is highly requisite for every individual in the profession boldly to stand forward in defence of our rights; and I exceedingly admire the zeal and ability with which you have uniformly advocated the interests of the profession.

I am, sir,
Your obedient servant,
CHIRURGUS.

November 10, 1836.

NORTHERN DISPENSARY.

THE LATE RESIGNATIONS.

THE resignations of the medical officers of the Northern Dispensary (namely, of Dr. Roget, the consulting physician, Dr. Stroud and Dr. Theophilus Thompson, the physicians, and of Mr. Bishop, the surgeon of the institution), which, as appears by their advertisements in the newspapers, took place on the 7th instant, will naturally lead the public to inquire into the circumstances which have given rise to this simultaneous movement on their part. The reason they assign is the prevalence of certain abuses in the department of the apothecary to the Dispensary, of so serious a nature as greatly to impede the efficiency, and injure the character, of the institution; and which, in utter disregard of the strong and unanimous remonstrances of all the medical officers, the Committee of Management have persisted in upholding. We have since heard that the complaint originated in the attention of the late apothecary having, for some time past, been diverted from medical views by a desire to qualify himself for the Church; and that during his frequent and prolonged absences from the Dispensary in prosecution of that object (absences which were connived at by his friends on the Committee), he left the business of dispensing medicines to the patients to be performed by young men, who either were not properly qualified, or who did not properly execute this duty. Having lately taken holy orders, he has now left the Dispensary; but the Committee have appointed his younger brother in his place, to the exclusion of other candidates of superior qualifications; thus holding forth encouragement, instead of marking their reprobation, of a principle of so injurious a tendency.

It is evident that under this system of mismanagement no medical man, who has any regard to character, could retain, and that none will be willing to accept a trust, which, if exercised under the control of such masters, could never be effectually or honourably discharged.

ADJUDICATION OF THE ANNUAL PRIZES OF THE SOCIETY OF APOTHECARIES.

THE PRIZE QUESTIONS.

TUESDAY last was the day appointed by the Master (Mr. Hingeston) and Wardens (Messrs Johnson and Malim) of the Apothecaries' Company, for the adjudication of the prizes of a gold and silver medal, given by the Society annually. The examiner this year was Mr. Ward, of Wellclose Square. The competitors were six in number. The examination was twofold—*vivâ voce*, and written. The following were the questions put:—

1. What are the special properties of cellular tissue?
2. What are the special properties of woody tissue?
3. In what parts of plants do spiral vessels occur?
4. Mention any families of exogens in which neither spiral vessels nor ducts are found?
5. What are the compound organs of flowering plants?
6. Describe the structure of the exogenous and endogenous stem.

7. Explain Du Petit Thouars' theory on the formation of wood, and shew that it is equally applicable to endogens and exogens.

8. Where are the secretions of exogens chiefly deposited?

9. At what period are the secretions of herbaceous plants in the greatest perfection?

10. What is the nature of stipules?

11. Are there any orders which are distinguished by the form, presence, or absence of them?

12. What are bracts? State their various kinds.

13. Explain the following terms:—Spike, racême, amentum, spadix, corymb, umbel, fascicle, capitulum, panicle, cyme.

14. Give examples of the following kinds of leaves:—The veinless, straight-veined, curve-veined, netted, ribbed, hidden-veined.

15. Are there any orders which are distinguished by the venation of their leaves?

16. State the use of leaves.

17. What functions are performed by the cuticle and stomata, and why are these organs wanting in submerged leaves?

18. Name any closely allied orders which are distinguished by the number of cells in the anther.

19. Describe the structure of the pistil.

20. Give examples in proof of floral organs being derived from modifications of leaves.

21. What are the conditions necessary for the germination of a seed, and the chemical and physical phenomena accompanying that process?

22. Are there any closely allied orders which are distinguished by the milkiness of the sap?

23. Explain Dutrochet's theory of the motions of fluids in plants, and by this theory account for the dispersion of the seeds of Momordica Elaterium.

24. The fruit of Convolvulus, and C. major, has a descending direction, that of C. sepium an ascending. How do physiologists account for this?

25. Define the following terms: conicus, conoideus, cylindricus, tubulosus, ovoideus, ovalis, ovatus, filiformis, capillaris, ringens, labiatus, subulatus, acerosus, truncatus, præmorsus.

26. State briefly the artificial system of Linnæus.

27. Give the essential characters of the primary divisions of plants, according to natural affinities.

28. Translate the following passage, and name the author. "Classes, quo magis naturales, eo, cæteris paribus, præstantiores sunt. Affines conveniunt habitu, nascendi modo, proprietatibus, viribus, usu. Summorum Botanicorum hodiernus labor in his sudat, et desudare decet. Methodus Naturalis hinc ultimus finis Botanices est, et erit."

29. It is said that plants exhibit a corresponding agreement in structure, and medical or chemical properties. Are there any orders which offer no exceptions to this rule?

30. What is the character of Ranunculaceæ, and how are they distinguished from Dilleniaceæ, Magnoliaceæ, Papaveraceæ, and Nymphæaceæ?

31. How are Proteaceæ distinguished from the orders to which they are most nearly allied?

32. How are Lobeliaceæ distinguished from Campanulaceæ, and Urticaceæ from Artocarpeæ?

Refer to their proper places in the natural system, the following plants.

33. Raphiolepis Indica.
34. Cluytia pulchella.
35. Aralia sambucifolia.
36. Olea capensis.
37. A species of Muralta.
38. Trachymene lanceolata.
39. Escallonia rubra.
40. Iberis Gibraltaica *.

Each of these questions was valued by a certain number of marks, the total value of the whole series of questions being estimated at 1110 marks. The gentleman (Mr. Jenner) to whom the gold medal was adjudged, obtained 965 marks, while the gainer of the silver medal (Mr. Teggemeir) had 925. The answers of three other candidates were so excellent, that Mr. Ward considered they were entitled to some mark of approbation, but as the meeting on Tuesday was not competent to give this, the motto papers were not then opened, and consequently the names of these three gentlemen are at present unknown. The number of marks gained by the first of the unsuccessful competitors was 885.

Mr. Ward read over to the meeting the answers of several of the candidates to three or four of his questions; and it is but justice to the competitors to say, that they were excellent: and judging from these specimens, we have no hesitation in saying the successful candidates well deserved the prizes they gained.

* These plants were, of course, given to the candidates unnamed.

LECTURES

ON

LOCAL HYSTERICAL AFFECTIONS,

Delivered in the Medical Theatre of St. George's Hospital,

BY SIR B. C. BRODIE, BART. F.R.S.

LECTURE III.

Pathology of Hysteria—Result of Dissections—Treatment of Local Hysteria—Prevention of the Disease—Effect of Tonics—Local applications—Division of Nerves—Other operations—Concluding caution.

ALTHOUGH the examples of local hysterical affections which I have adduced in the two preceding lectures, form only a part of those which you will meet with in practice, they are probably sufficient to answer the purpose of rendering you less liable than you would have been otherwise, to fall into the very common error of confounding cases of this description with those of real local disease. This is the principal object which I have had in view, in directing your attention to this subject: but it is one of much interest, and I am unwilling that you should leave it without proceeding somewhat further in the inquiries to which it leads. In the present lecture, then, I propose to offer some observations on the pathology of these cases, and on the treatment which should be employed for their relief.

Pathology of Hysteria.

Probably the following question has already presented itself to your minds. Is there any sufficient evidence that symptoms so various and dissimilar as some of those which have been described, depend on one and the same cause? Are there good grounds for the hypothesis that a pain in the knee in one case, retention of urine in a second, tympanitis in a third, are only different manifestations of one and the same disease, and that they are connected with the same state of system as that which gives rise to the common fits of hysteria? The same question may arise if you refer to Sydenham's observations on hysteria, in which he has endeavoured to point out the symptoms which may mislead the medical, as I (following him *haud passibus æquis*) have now endeavoured to point out those which may mislead the surgical, practitioner. To this it may be answered, that there is scarcely a single case, such as I have endeavoured to describe, in which, if you have the opportunity of studying its history and progress, you will not find abundant proof of the patient having suffered, in a greater or less degree, from the ordinary and acknowledged symptoms of hysteria: the two orders of symptoms sometimes existing simultaneously—at other times, and more frequently, alternating with each other; and thus even a limited experience will enable you to satisfy your minds on the subject. But when you have attained an enlarged experience in your profession, you will find that it affords you evidence of another kind, though of such a nature that one individual cannot well communicate it to another, either in a lecture or writing. You will then find, that while no two of these cases are precisely and in all respects alike, it is by no means difficult to trace a series of cases leading from one to the other by an almost imperceptible gradation, and connecting with each other symptoms which, in the first instance, might be regarded as the most distant and heterogeneous.

Another question cannot fail to arise in the progress of these investigations. What is the real nature of the disease on which these various and anomalous symptoms depend? We cannot doubt that its locality is in the nervous system. This is sufficiently demonstrated by the characters of the symptoms themselves. Dissection, which illuminates so many of the darkest regions of pathology, affords us little assistance here: at least we derive from it only negative information. I have, in several instances, examined the parts to which hysterical pains had been referred; and in one very aggravated case of the kind, I made a careful dissection of all the nerves by which they were supplied, but I have never been able to discover in them any thing different from what belonged to their natural condition. But every part of the body has its corresponding point in the brain, and the greater number of them have their corresponding points in the spinal cord also. Does the examination of these organs lead to any more satisfactory result? The best proof that it does not do so is furnished by the following circumstance: although so many die of other diseases, who have suffered from hysteria also, and the opportunities of examining the bodies of hysterical patients after death are therefore sufficiently numerous, yet the works of the best morbid anatomists contain no observations whatever on the subject. I have had the opportunity of instituting *post-mortem* examinations in three cases, in which the hysterical affections were of so aggravated a kind as to be, directly or indirectly, the cause of death; and you shall know the result. In one of them, the patient laboured under a very severe hysterical pain in the side, and was liable, among various other hysterical symptoms, to fits, in which

she was scarcely conscious of her own actions. It must have been in one of these attacks that a great number of needles were introduced into one of her legs, which afterwards occasioned much inflammation and effusion of serum into the cellular texture. The patient died, and the body was most carefully examined, but no morbid appearances of any kind could be discovered in it, except what belonged to the œdematous state of the leg. Another case is one to which I have referred already, in which, the patient having long laboured under an hysterical retention of urine, the bladder was found enormously distended, of a black colour, the mucous membrane and muscular tunic being at the same time much attenuated. This patient was an unmarried female, twenty nine years of age. Having been previously indisposed for a considerable time, she was supposed to have sprained her wrist in lifting a heavy saucepan. From this time she was never free from pain, referred to the outer part of the lower extremity of the radius. The pain extended up the fore-arm, and downwards on the side. In November, 1814, about a month after the occurrence of the accident, she was admitted into the hospital. At this time the most careful examination could detect no alteration in the appearance of the limb, but she complained of a constant and intense pain, which extended from the supposed seat of the injury downwards to the fingers, upwards to the shoulder, and again downwards to the spine and sternum. She had great oppression and difficulty of respiration, occasional twitches of the muscles of the face, and any sudden motion of the hand aggravated all these symptoms, and then threw her into a state approaching to that of syncope; in which she was almost unconscious of all that happened, lying with her eyes wide open, and at last recovering with an hysterical sobbing. Her pulse was feeble, beating 120 times in a minute. Forty ounces of urine were drawn off from the bladder, but without any relief as to the other symptoms. The tongue became black and dry; the pulse more feeble; the belly tympanitic; the alvine evacuations being of a dark colour. Then there was hiccough and vomiting; she became weaker and weaker, and died after the lapse of 14 days from the time of her admission into the hospital. After death, the brain and the thoracic and abdominal viscera were very carefully examined, but no morbid appearances were discovered in any one of them, with the exception of the peculiar condition of the bladder which was described formerly, and two ulcers of the mucous membrane of the *ileum*, each not more than half an inch in length, but occupying almost the entire circumference of the intestine.

The female, who was the subject of the third case had laboured under a paralytic affection of the lower limbs (*paraplegia*), which Dr. Seymour believed, with good reason, to be connected with, and the consequence of, hysteria. A practitioner whom she consulted, however, thought it advisable to have recourse to repeated blood-letting and other methods of depletion. The result was, the formation of extensive sloughs of the nates and of the soft parts covering the ankles. The patient was now admitted into the hospital, in a state of great exhaustion, and soon afterwards died. The brain and spinal cord were most carefully examined, in the presence of many of you who are now present, but it could not be discovered that they differed, in the smallest degree, from their natural condition; nor were there any signs of disease in the thoracic or abdominal viscera.

In adducing these facts, however, I by no means intend to assert that the organization of the nervous system, in a person who is liable to aggravated hysterical affections, differs in no respect from that of another. The intimate structure of the brain, spinal cord, and nerves, is on too minute a scale for our senses to be able to perceive and comprehend it, and of course there may be differences in the organization of these organs which our senses are incapable of detecting also. There is, it is true, nothing in the history of hysteria to justify the opinion that it is connected with any morbid growth, or morbid change of structure, such as we find to exist in what are usually termed organic diseases: but it is easy to suppose, without reference to organic disease, that the construction of the nervous system, at the period when growth is concluded, may not be the same in all individuals, and that an imperfect development of it may lay the foundation of all the aggravated hysterical affections. It seems to me that this hypothesis affords a reasonable explanation of all the phenomena which those strange diseases present to our observation, and that it is not easy to explain them in any other manner. This being admitted, the connexion of hysteria with the habits of early life, while growth is going on, becomes no mystery. We can understand, also, wherefore it is that the disposition is often, to a certain degree, hereditary—that it prevails in particular families, and that having been once established in the system, it is never totally eradicated. Nor is this opinion in any way contradicted by the circumstance of hysterical symptoms alternating with longer or shorter intervals of perfect health. It is the same with many other

nervous diseases, some of which are much more formidable than these. The lunatic has intervals in which his delusions vanish. A tumor pressing on the brain may occasion epilepsy: the cause exists always, but after the patient has had one fit, weeks or months may elapse before he has another. In like manner a patient may have a nervous system so constructed as to render her liable to attacks of hysteria. While she is strong and healthy in other respects, no hysterical symptoms arise; but if she be weakened by an attack of fever, by loss of blood, by too great exertion of mind and body, or depressed by anxiety, grief, or disappointment, the disease is rendered manifest, and it assumes one form or another, accordingly as accident directs its influence to one or another part of the system.

This view of the origin and nature of hysterical affections derives some confirmation from a circumstance which I have had frequent occasion to observe; although it has not, as far as I know, been noticed by pathological writers. In those who are much disposed to them, there is an evident weakness and laxity of the tissues, independently of what may be supposed to belong to the tissues of the nervous system. Thus there is a peculiar looseness of the joints; sometimes existing to such an extent that they are liable to a kind of subluxation (a slipping in and out, as the patient terms it), without any laceration of the synovial membrane or ligaments. I have known several cases in which a patient, on making some sudden exertion, has experienced a sensation as if some muscular or ligamentous fibres had given way; and, in some instances, a severe nervous pain, referred to this and the neighbouring parts, has remained for a long time afterwards. It is not unusual for the smaller blood-vessels to burst, so as to occasion slight hæmorrhage; although there is no actual disease in the bleeding part. This occurs most frequently with respect to the vessels of the mucous membranes. The disposition to hæmorrhage, however, is not peculiar to these textures. In a patient concerning whom I was consulted with Mr. Mawdsley, there had been repeated hæmorrhages from the ears.

These things must be regarded as indications of want of physical power in the system, and such is the prevailing character of hysterical disease—most distinctly marked, of course, in the most aggravated cases of the kind. A large proportion of hysterical patients suffer from cold hands and feet, have a feeble contracted pulse, a small appetite for food, and are wearied by very small exertions; they are more liable than other persons to lateral curvature of the spine. In some instances, and more especially in the parts which are most exposed to the external temperature, or at the greatest distance from the vital organs, the point of the nose, for example, and the ankles, the circulation is so weak that they assume at times a purple appearance, followed by vesications, and even by a thin slough. These last-mentioned symptoms are, in themselves, a proof of an insufficient generation of nervous energy; they correspond to what is observed after severe injuries of the spinal cord, as well as to what occurred in the following cases, as the consequence of an injury of a nerve. A young man met with an accident, in which the ulnar nerve was divided behind the inner condyle of the arm. The wound healed readily; but when I was consulted, about three months afterwards, the little finger was cold, and deprived of sensation, with purple spots on it, similar to those which precede the formation of vesications. A girl was admitted some years ago into the hospital after a similar accident. The little finger was cold and benumbed, and occasionally the whole of the integuments covering it assumed a dark purple colour: this was always followed by a broad vesication; then by a superficial sore, which, however, healed by the formation of a new cuticle; and this process was repeated several times while the girl remained in the hospital.

Treatment of Local Hysterical Affections.

In some instances the disposition to hysteria manifestly depends on an original mal-construction of the nervous system, which probably has been transmitted from the parent to the child: in others it is equally manifest that it is the result of injudicious management in the early part of life. In the latter order of cases, the ill consequences, which would otherwise ensue, may be altogether averted by the timely adoption of a better system of education; and in the former, much may be done in the interval between the period of infancy and that of growth being completed, to improve the condition of the individual, and to render her situation in after-life less distressing than it would be otherwise.

You can render no more essential service to the more affluent classes of society, than by availing yourselves of every opportunity of explaining to those among them who are parents, how much the ordinary system of education tends to engender the disposition to these diseases among their female children. If you would go further, so as to make them understand in what their error consists—what they ought

to do, and what they ought to leave undone, you need only point out the difference between the plans usually pursued in the bringing up of the two sexes. The boys are sent at an early age to school, where a large portion of their time is passed in taking exercise in the open air; while their sisters are confined to heated rooms, taking little exercise out of doors, and often none at all, except in a carriage. Then, for the most part, the latter spend much more of their time in actual study than the former. The mind is over-educated at the expense of the physical structure, and, after all, with little advantage to the mind itself; for who can doubt that the principal object of this part of education ought to be, not so much to fill the mind with knowledge, as to train it to a right exercise of its intellectual and moral faculties, or that, other things being the same, this is more easily accomplished in those, whose animal functions are preserved in a healthy state, than it is in others?

But these observations relate only to measures of prevention; whereas, in practice, you will have to deal with cases in which the hysterical construction of the nervous system already exists.

The medical treatment of hysteria is in the department of the physician; and as this subject is treated of at length in the lectures on the practice of medicine, I shall only offer a few observations as to the principles in which it should be conducted.

In those in whom the liability to hysterical diseases exists, as I have already had occasion to observe, the symptoms of hysteria are not always present, and much may be done by art towards rendering their occurrence less frequent, and their character less severe, than would be the case otherwise. These symptoms are especially called into existence whenever, from any cause, the bodily powers are reduced below the ordinary standard; and it is reasonable to suppose that an opposite effect will be produced by whatever tends to elevate these powers, and maintain the general health. The whole class of tonic remedies, especially steel, quinine, sulphate of zinc, and ammonia, may, under certain circumstances, be employed with advantage. So also, it is of importance that the patient should live on a generous diet—that she should take exercise out of doors—that she should live in the pure air of the country rather than in that of a crowded city—and that her mind should be agreeably occupied, without being exhausted by great exertions. Nothing tends more to aggravate the disposition to hysteria than the tedium and *ennui* of a life without occupation; when the mind is, as it were, thrown back upon itself, brooding over imaginary misfortunes, and creating for itself objects of anxiety.

The use of what are usually called antispasmodic remedies, especially valerian and assafœtida, is indicated, not where there is merely a liability to hysterical symptoms, but where these symptoms are actually present. Those tonics which are useful in preventing these symptoms, are useful in the removal of them also, especially where the disease assumes a chronic form, as it generally does in the cases which fall under the observation of the surgeon. Here, also, I have in several instances known much advantage to arise from a long-continued course of the sulphate of copper administered in pills, in small doses. Nor must we overlook another important rule of practice. There is often some particular circumstance in the state of the system at the time, which operates as the immediate exciting cause of the hysterical symptoms, and which medicine may remove. For example, in one individual there may be a furred tongue, and a costive state of the bowels; in another deficient menstruation; and purgatives and emmenagogues may be administered with advantage, either separately or in combination. Again, it is not unusual in aggravated cases of hysteria to find the urine depositing a large quantity of lithic acid, in the form of sand; or the urine may be voided high-coloured, depositing a pink amorphous sediment, abounding in the lithate of ammonia; and in either of these cases the exhibition of alkalies, combined with alterative doses of mercury, and a regulated diet, will contribute to produce a cure, the unhealthy quality of the urine seeming to be the cause rather than the effect of the hysterical affection.

On all these points I refer you to the instructions which you will receive from some of your other teachers; but there are some questions connected with the surgical treatment of local hysterical affections, into the consideration of which I shall feel it my duty to enter more fully; although, in so doing, the advice which I shall have to give you will be for the most part of a negative kind, relating not so much to what you ought to do, as to what you ought to leave undone.

Hysterical pains are sometimes relieved by friction with a stimulating liniment—such, for example, as the compound camphor liniment, which may also be used in combination with the tincture of opium. The application of the belladonna plaster is occasionally useful, although it certainly

does not produce those remarkable effects which not unfrequently follow its use in other cases of neuralgia.

Hysterical pains are sometimes palliated by bathing the affected part with the following lotion, applied tepid:—

℞ Misturæ Camphoræ, ℥iss.; Spiritus Rosmarini, ℥iss. M. fiat lotio.

In some instances the patients derive advantage from the exposure of the part to the vapour of hot water. This is especially useful in the cases of that peculiar affection of the wrist and hand which I described in the last lecture.

In those cases in which the limb to which the symptoms are referred is affected alternately with heat and cold, I have known the following plan of treatment to be attended with excellent effects. During what may be termed the hot fit, let a compress be applied wet with a cold spirituous lotion; and when the heat has subsided, and the limb has become cold, let a thick woollen stocking be drawn over it, and then an oiled silk covering over the worsted stocking, so as to confine the heat and perspiration. When the cold fit has subsided, the oiled silk covering may be removed. This local treatment, however, should be combined with the exhibition of the sulphate of quinine, the use of which seems to be especially indicated by the intermitting character of the symptoms.

In some cases of hysterical neuralgia the patient is supposed to derive benefit from the abstraction of blood by leeches, or cupping, or even by venesection. Indeed, I have no doubt that the loss of blood is occasionally followed by a real alleviation of pain. But the relief is never otherwise than temporary; and wherever I have known this kind of treatment to be frequently resorted to, the ultimate result has been, certainly, not only not beneficial, but absolutely injurious to the patient. In fact, we may lay it down as a general rule, that whatever lessens the physical powers tends to prolong the duration of hysterical diseases of all kinds; and nothing produces this effect in a more marked manner than repeated blood-letting. Those who are subjected to this treatment, according to my experience, become almost invariably invalids for life; and I have no doubt that not unfrequently their lives are materially shortened by it.

Blisters, issues, and the whole class of counter-irritants, in the majority of cases increase the patient's sufferings; and there is one objection that may be urged against all local remedies, which applies especially to these, namely, that they prevent the attention being abstracted from the local symptoms. I may take this opportunity of observing, that nothing is more essential to the patient's recovery than that her mind should not be constantly occupied with the subject of her ailments. The treatment employed should be such as will involve as little as possible deviation from the ordinary habits of life. Thus in a case of hysterical neuralgia of the knee or hip, it seldom happens that any real amendment takes place while the patient remains confined as an invalid to her sofa. The pain may abate, but a sense of weakness follows, which disables her from walking, more than the pain itself, and which, for obvious reasons, goes on increasing in proportion as the confinement is of longer duration. The first step towards a cure is, that the patient should have sufficient strength of mind to begin to use the limb in spite of present suffering.

Another question connected with surgical practice remains to be considered. In hysterical diseases affecting the extremities, will any advantage arise from the division of the nerves which supply the affected part, so as to destroy the communication between it and the sensorium? or from the entire removal of the part itself, by excision or amputation? If the view which I have been led to take of these affections, namely, that they belong to the nervous system generally, and not to the part to which the symptoms are referred, has any foundation in reality, it cannot be expected that such operations will lead to any good result: and the notorious failure of similar operations, when performed in cases of *tic douloureux* of the face, and *tetanus*, undoubtedly tends to confirm this opinion as to their utter inutility. Pathological science, however, is not so far advanced as to authorize us in any instance to disregard the lessons of experience; and it is well, before we arrive at a positive conclusion on the subject, that we should refer to this higher source of instruction.

In a case which I have already mentioned, of a young lady who had a train of most severe hysterical symptoms following the accidental prick of her finger, I was induced (many years ago) to divide the digital nerves. This was effected by a circular incision, carefully performed, extending through the whole of the nerves, integuments, vessels, and cellular texture, to the bones laterally, and to the aponeuroses of the tendons, anteriorly and posteriorly. The result was, that the patient's sufferings were aggravated rather than relieved.

As long ago as the year 1818, I was requested to visit a lady in the country on account of a disease of the knee. I

was led to believe that she had laboured under an inflammation of the synovial membrane, which had in a great degree subsided, but that the harder textures had suffered in consequence, and that the cartilages were in danger of being ulcerated, and I recommended a plan of treatment accordingly. Whether, with my present experience on the subject, I should have taken the same view of her case, I will not undertake to say, but the result was, that a material improvement took place in the first instance. After some time, however, there was a manifest aggravation of all her symptoms. She suffered more than ever; so that she became anxious to undergo the amputation of the limb. I was now again consulted respecting her, but from the written accounts which I received, I concluded that the pain did not indicate the existence of any serious disease, and that the circumstances of the case did not justify so violent a measure as had been proposed. However, her wishes remained unaltered, and two surgeons of eminence in the country yielding to her entreaties, performed the operation. On dissection of the amputated joint, they were surprised to find that there was no collection of matter in its cavity — that the cartilages had disappeared in one spot, of very limited extent —and that there was no other mischief. The stump healed readily enough, but she obtained no relief. I had the opportunity of seeing her some months after the operation, suffering more than ever, with intense pain in the stump, and violent convulsive action of the muscles which move the thigh bone on the pelvis.

Mr. Soden, of Bath, informed me of another of these cases, which fell under his observation, in which also the limb was amputated above the knee, but with no better result than in the case last mentioned. The symptoms attacked the stump, and the patient suffered as much after the operation as she had done before.

The history of a third case of the same kind has been published by Mr. Mayo, in his Outlines of Pathology. The knee was amputated, and the stump healed. Soon after, the stump was accidentally struck, and this slight accident was followed by pain in the part, exactly similar to that which had been referred formerly to the knee. Amputation was then performed a second time; but as the wound healed, the pain recurred, being now referred to the stump. Mr. Mayo then divided the sciatic nerve, below the edge of the *glutæus maximus* muscle. At first the pain was supposed to have been relieved, as after the former operations; but it returned on the wound being healed. At this period I had the opportunity of seeing the patient, the pain which she endured being as severe as ever. In short, she had undergone these various operations, without having derived the smallest advantage from any one of them.

It must be acknowledged that these, and other similar cases which might be enumerated, seem to be quite conclusive against all attempts to relieve these hysterical affections by operation. Some evidence, however, may, and has been, adduced, on the other side of the question.

A young woman was bled in the arm, in July, 1820. The wound healed as usual, but on the 7th of August she was admitted into St. George's hospital labouring under hysterical pain, referred chiefly to the cicatrix, but extending also downwards to the hand, upwards to the axilla, and again downwards on the side to the leg and foot, the latter being at the same time in a great degree benumbed. The whole of the arm was cold, and of a purple colour, and the skin was exquisitely sensible when pinched. On the 25th of August I excised the cicatrix. She was supposed to be immediately relieved, and when the wound made in the operation was healed, she left the hospital as cured. So far, then, it appeared as if the operation had been successful. But observe what happened afterwards. At the expiration of two months, she was re-admitted, not on account of a recurrence of the pain in the arm, but with other symptoms depending on the same state of the general system. The nose was cold, and of a purple colour, and there was a similar condition of the integuments of the ankle. On the latter there was a broad vesication; and both of these parts seemed as if on the point of becoming gangrenous. This result, however, did not take place, and I lost sight of the patient some time afterwards.

In Mr. Mayo's patient*, whose case I have already mentioned, we are informed that he afterwards was induced to perform a further operation—removing the head of the thigh bone from the acetabulum: and I have a letter from Mr. Mayo, in which he states that this last measure has been followed by a relief from pain up to the present time. We are also informed that Sir Astley Cooper† amputated the arm at the shoulder joint, on account of a neuralgic affection of a stump, and that the patient was permanently cured; and that similar operations were performed successfully by Mr. Bransby Cooper and Mr. Langstaff. However, until we know more of these cases than is

* Medical Gazette, May 7, 1836.
† Op. cit.

now recorded, it is impossible for us to determine whether they did or did not belong to the class of hysterical affections. Even if they did, the question still remains—how long did the patients remain under the observation of the surgeons afterwards; and was a cure really obtained, or was there simply a commutation of one hysterical affection for another?

In estimating the value, not only of such operations, but of various other modes of treatment which have been supposed at one time or another to be useful in cases of aggravated hysteria, we are never to lose sight of the following circumstances. 1. *Hysterical symptoms frequently disappear at once, without any manifest cause for their disappearance.* Examples of this fact may be found among the cases to which I have had occasion to refer in the preceding lectures. A young lady, who had been for more than two years confined to her bed on account of an hysterical affection simulating disease of the hip joint, recovered suddenly one night while in the act of turning in bed. Another young lady, in whom a long train of most severe hysterical symptoms followed an accidental prick of one of her fingers, after the disease had existed for a great length of time (if I am not much mistaken, for more than two years), recovered suddenly, also. 2. *It still more frequently happens that recovery from hysterical symptoms immediately follows a forcible impression of any kind made on the nervous system.* A young lady, who had long laboured under an hysterical neuralgia of the hip and thigh, and had been unable to walk, or even to stand, in consequence, lost all her symptoms on being thrown from a donkey which she was riding. This case also has been already noticed; and the following are only a few, among many others, which might be adduced, if it were necessary, to illustrate the same principle, shewing that moral and physical impressions are in this respect alike, and capable of producing exactly the same effect.

Many years ago, I attended a young lady on account of a painful affection of the instep, which I certainly did not understand at the time, but of which, with my present experience on these subjects, I am satisfied that it was hysterical neuralgia, and nothing else. She was attended by other surgeons afterwards, who, I believe, were as much perplexed as I was as to the nature of the disease, and who, at all events, gave her no relief. At last, while suffering as much as ever, she was informed of some remarkable cures obtained by the use of the vapour-bath, and champooing, and she immediately went to Brighton, that she might make a trial of these remedies. The first champooing gave her great relief; the second completed the cure. I was consulted respecting her afterwards, labouring under a nervous affection of the arm and forearm.

I have been informed, on good authority, of the case of a young lady, who had long laboured under a severe hysterical affection, attended with spasmodic contraction of the muscles of one of the lower limbs, and whose symptoms left her suddenly on the extraction of a molar tooth.

In the Christian Observer for November, 1830, we find recorded the history of Miss Fancourt, who had long been confined to her couch, in consequence of what was evidently an hysterical affection simulating disease of the hip joint, and was supposed to have been miraculously cured under the influence of the prayers of her spiritual adviser, leaving her couch at once, and walking down to supper, to the astonishment of her family.

We need not pursue this part of our inquiries further. To you who will soon be engaged in the practice of your profession, what I have now stated will be sufficient to impress your minds with a proper degree of scepticism, and to prevent you being misled by the caprices of these strange disorders. With respect to the great majority of society, who do not know by experience how great is the difficulty of obtaining exact evidence as to the operation even of the remedies in common use, and whose minds are not trained to these investigations, I feel that it would be almost a waste of time to endeavour to enlighten them on the subject. "So ardently," says a distinguished moral philosopher*, "do we desire to find every thing that happens within our observation thus connected with something else, as its cause or occasion, that we are apt to fancy connexions upon the slightest grounds; and this weakness is most remarkable in the ignorant, who know least of the several connexions established in nature. * * * * Many years ago a white ox was brought into the country, of so enormous a size that people came many miles to see him. There happened afterwards an uncommon fatality among women in child-bearing. Two such uncommon events following one another gave a suspicion of their connexion, and occasioned a common opinion among the country people that the white ox was the cause of the fatality." Many of the notions which the public entertain on subjects connected with the healing art, may be traced to the operation of the principle which has been thus ex-

* Reid's Inquiry into the Human Mind; on the Principles of Common Sense. Chap. ii. sect. 9.

posed by Dr. Reid. Conjurors of all kinds, from Prince Hohenlohe and the professors of animal magnetism, down to the most vulgar impostors, will never fail to share the reputation of curing diseases with those who have studied their profession as a science; and it is especially in that class of cases to which I have called your attention in this and the preceding lectures, that their success will be greatest. We must submit to this mortification. But let us at the same time be careful that there is nothing in our own conduct to encourage such delusions. If we would lead the public to more correct views on those subjects, we must first endeavour to make them understand, in some degree, what our art is worth, and what it is not; and, in particular, we must divest ourselves of that morbid anxiety for reputation, which would lead us to claim for ourselves the credit of our patient's recovery, in those instances in which it must be manifest to a disinterested observer that it belongs to the ordinary course of events, to the efforts of the patient's constitution, or to accidental circumstances, and not to our own skill and attention.

Before I quit this subject, I shall trouble you with one further piece of advice. I have told you that it is important that you should not mistake cases of nervous affection for those of real local disease. It is equally important that you should not mistake the latter for the former. Whenever you are in doubt, be careful that you do not employ any kind of treatment which would be injurious if local disease existed. A short delay will always enable you to understand the exact nature of the case, so that you can no longer hesitate as to the remedies which are required for its relief.

BUCKS MEDICAL ASSOCIATION.

DECLARATORY RESOLUTIONS, AND PETITION TO PARLIAMENT.

To the Editor of the Medical Gazette.

SIR,

I HAVE the honour to transmit to you an abstract of the minutes of a late meeting of the Bucks Medical Association, and a copy of a petition to both Houses of Parliament, to be presented early next session, and am, sir,

Your very obedient servant,

ROBT. CEELY, *Hon. Sec.*

Aylesbury, Nov. 9, 1836.

At a meeting of the Bucks Medical Association, held at the Infirmary in Aylesbury, November 3, 1836, Henry Lupton, Esq. in the chair, it was resolved—

That this meeting views, with the deepest concern, the increased oppression and injustice inflicted on the medical profession by the Poor-Law authorities; which, it is to be feared, if passively submitted to, will have a serious influence on its character and station.

That the attempts of the Poor-Law Commissioners to induce the medical officers of parochial unions to fill the subordinate office of district registrars of births, deaths, and marriages, is considered by this meeting to be another device for injuring, insulting, and degrading the general practitioner.

That the recent conduct of the Poor-Law Commissioners and their Secretary, towards Mr. Kingston, of St. Alban's, abundantly manifests their readiness to visit on an individual, *when convenient*, that obloquy and reproach so eminently due to their scheme of medical relief, which, in spite of every remonstrance, they so pertinaciously maintain.

That their professions of humane consideration for the necessities of the suffering poor, and of retributive justice towards those who neglect them, are proved to be insincere, by their allowing the treatment of the sick poor to be let by tender to the lowest bidder; by their forcing medical practitioners, under severe penalties, to undertake duties which, from their nature and extent, are clearly impracticable; by their augmenting the difficulties and increasing the causes of delay in procuring medical aid; and by their utter disregard of the many lamentable and even fatal consequences that have already ensued, and must inevitably recur, from the notorious insufficiency of their *own* arrangements.

That, to secure a judicious distribution, and the proper performance, of medical duties, as well as to furnish a competent tribunal for investigating the conduct of medical officers, it is essential that a medical board, as in the army and navy, should be appointed, to superintend and control the medical department of the poor-law administration.

That a petition, embodying the above sentiments, and praying for inquiry, be presented to both Houses of Parliament, early in the ensuing session.

That this meeting recommends to the notice of the members of the Bucks Medical Association, the circular lately issued by the Provincial Medical Association, for the purpose of collecting opinions as to the mode and amount of medico-parochial remuneration.

That it is highly desirable that medical practitioners should collect and arrange authentic facts relative to their complaints

against the present system of medical relief, preparatory to the proceedings of the expected Parliamentary Committee of Inquiry.

[Then follow two or three resolutions of thanks to individuals, &c.]

The Petition of the undersigned Medical Practitioners, residing in the County of Bucks, humbly sheweth,

That your petitioners deprecate the system of providing medical relief for the sick poor adopted by the Poor-Law Commissioners.

That the prevalence of contract by "tender,"—the general inadequacy of the remuneration — the increased extent of districts, with a diminished and insufficient supply of medical officers—the numerous impediments to an efficient performance of medical duties—and the indignities offered by the new authorities to medical practitioners—are productive of effects equally pernicious to the sick paupers, the medical profession, and the whole community.

That a remuneration calculated to secure proper attendance; a mode of appointment not derogatory to the profession; regulations for the prompt supply of medical relief to the destitute sick; and a general supervision and control of the medical department of the poor-law administration, by a Medical Board, are essential to the interests and welfare of all parties concerned.

Your petitioners, therefore, humbly but earnestly pray, that your Honourable House will speedily take this important matter into serious consideration, by appointing a Committee of Inquiry, and enact such remedies as to your wisdom may seem fit.

And your petitioners, as in duty bound, &c. &c.

WOUND OF THE BRACHIAL ARTERY,

Cured by Compression.

By J. W. Heustis, M.D., of Mobile.

On the night of the 27th of March, I was called to see a man that had been stabbed in the humerus: as I was not at home, my student, Mr. Carter, attended him, in company with Dr. Lynch H. Deas. We met in consultation a short time afterwards. The hæmorrhage had ceased from syncope and loss of blood, and I found the patient perfectly blanched, and almost lifeless; he was cold and nearly inanimate, with no perceptible pulse. The wound had been inflicted with a dirk, upon the inner side of the biceps, about six inches below the upper extremity of the humerus. I had previously experienced the efficacy of compression in wounds and aneurisms of the artery at the bend of the arm, of which an account may be found in a preceding number of this journal. It was, therefore, adopted on the present occasion. A graduated compress was employed; and some five or six pieces of money, from the size of a dime to that of twenty-five cents, were wrapped in a rag, and placed accurately on the wound: over this a larger compress was applied, extending five or six inches along the course of the artery, and the whole secured by a roller bandage. A bandage of the same description was next applied, with moderate tightness, from the hand upwards, and the patient left, for the present, to time and repose. The next morning he was better; reaction had taken place, and the pulse in the opposite arm from the one wounded was quite perceptible, although no pulsation could be perceived in the other. On the third day, as he complained of pain from the tightness of the bandage, and as there was some tumefaction of the hand, the compression was slackened, and the pieces of money removed. The arm was still considerably swollen above the bandage, as it had been at first, where the bandage was applied, from the injection of blood between the muscles, and into the subcutaneous cellular substance. The compression, however, had caused this to be principally absorbed, so that where the compress had been applied, there was quite an indentation. The whole of the interior of the arm and forearm were much discoloured with ecchymosis, and tender to the touch.

There was no subsequent disposition to hæmorrhage from the wounded artery, which healed up, together with the external orifice, by the first intention, and without the formation of any aneurismal tumor. The pulse, however, in the radial artery of the injured limb, is still scarcely perceptible, and has probably been rendered impervious at the wounded part. His arm retains its sensibility and motion; the man, however, still remains rather feeble and pallid, from his excessive loss of blood.

From this and other instances which I have witnessed, I am inclined to think that ligatures are seldom necessary in wounds of the arteries of the extremities*.

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* American Journal of Medical Sciences, for August 1836.

SIR WILLIAM KNIGHTON.

[We know neither whence, nor from whom, the following has been sent to us; but as it bears internal evidence of fidelity, we give it to our readers just as it has been given to us.—Ed. Gaz.]

The Editor of the Medical Gazette should be informed that the late Sir William Knighton left Tavistock to be with Dr. Geach, who was the surgeon of the Royal Naval Hospital. He was a physician and accoucheur; and as this was before the period of reform, so called, he had a great deal of country practice; and to all his friends he introduced Mr. Knighton, saying, "that he might be trusted as himself, and that he had two advantages of which *he* was deprived, youth and memory." Dr. Geach died suddenly; and although Mr. Knighton's juvenile appearance made some of his patients at first demur, his manner was so prepossessing, that he soon became a general favourite. It was known how assiduously he studied; he was never heard of at a ball or public dinner. In two or three particular cases he met with great success. He attended the daughter of a naval officer, in a dangerous fever, with unwearied assiduity: night after night, for nearly three weeks, he remained by the bed-side. The Admiral's country residence was eight miles from Plymouth. During the day he was spared to see other patients; but at night he returned, when he was anxiously expected. The child's perfect recovery—the parents' gratitude being first due to the blessing of God—was gratefully, and in every respect satisfactorily, acknowledged by them. The mother particularly, to a numerous acquaintance, spoke in raptures of Mr. Knighton: in short, the ladies made him the fashion, and it may be said the lords also; for it was in the time of war, and there were many persons of consequence at Plymouth, in the militia regiments, who had power to patronize him in London. He was exhorted to quit the West of England. He had many friends, who grieved to part with him, but all of judgment felt, that, had it been in their power, they would not have detained him. The difficulty that first attended his practising in London has been detailed; I only trouble you because you passed over in silence the great era which, as I have said, had certainly much influence on the destiny of Sir William Knighton. I do not put any signature, for you know me not, nor do I know to whom I am writing.

Nov. 4, 1836.

PORTRAIT OF SIR B. BRODIE.

To the Editor of the Medical Gazette.

Sir,

Portraits of Sir A. Cooper, Mr. Abernethy, and other individuals of distinguished talents and superior merit, are in the hands of many of us; but, as far as I can learn, a likeness of Sir Benjamin Brodie has never yet appeared. It would give me great pleasure to add my mite to any subscription which might be set on foot to obtain one; and I am only surprised that, considering Sir Benjamin Brodie's exalted station in the profession, and his truly estimable character, this compliment has not yet been paid him.

With many apologies for trespassing on your valuable time, I am, sir,

Your obedient servant,

W. C. W.

London, Nov. 16, 1836.

[Our correspondent is evidently not aware that there *is* a print of Sir Benjamin,—though certainly not a good one.—E. G.]

NEW MEDICAL BOOKS.

A Treatise on the Structure of the Ear, and on Deafness, by A. W. Webster. 8vo.

Elementary System of Physiology, by J. Bostock, M.D. 3d edit. 1 vol. 8vo. 20s.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Nov.* 15, 1836.

Abscess	1	Fever, Typhus	5
Age and Debility	44	Gout	2
Apoplexy	9	Heart, diseased	4
Asthma	12	Hooping Cough	4
Cancer	1	Inflammation	31
Childbirth	1	Bowels & Stomach	5
Consumption	52	Brain	2
Convulsions	29	Lungs and Pleura	7
Croup	1	Liver, diseased	13
Dentition or Teething	7	Measles	6
Dropsy	18	Paralysis	4
Dropsy on the Brain	5	Small-pox	10
Epilepsy	1	Thrush	1
Erysipelas	1	Unknown Causes	8
Fever	3		
Fever, Scarlet	2	Casualties	6

Increase of Burials, as compared with the preceding week . . 44

NOTICES.

Mr. Crisp's strictures have been received; but we really must decline allowing the controversy to proceed any farther.

Our correspondent from the London Hospital will see that his suggestion has been adopted.

N. D.—We reply in the affirmative.

"Hibernicus" has been received. Also "An Old Navy Surgeon."

Erratum.—In Dr. Burke's paper, last number, p. 230, line 45, *for* half an ounce of laudanum, *read* half a drachm.

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 26, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture IX.

Medico-legal consideration of Impotence in the Female—Imperfect or anomalous structure—Occlusion, constriction, or total absence of essential parts—Sterility, from deficiency of the Uterus—the Ovaries—Modes of ascertaining the fact of Impotence in France, England, Germany—Remarkable cases—Practical suggestions.

Having treated, in last lecture, on those conditions, physical and moral, which constitute impotence in the male—and having noticed (always, you will observe, with reference to the requirements of Forensic Medicine) those modifications which are recognized as belonging to sexual inability—we shall now proceed to consider the subject of

IMPOTENCE IN THE FEMALE.

The grounds of any alleged inability in the female to have sexual intercourse must be sought wholly in physical causes.

(*a.*) *Imperfect Development.*

Age. — As in the male, the effect of either immature or advanced age is such as to prevent the reproductive act in the female. The constriction of the vagina previous to the approach of puberty is usually such as to preclude the introduction of the male organ; and so far there is decided impotence: while, with respect to very aged women, the rigidity of the parts may lead to the same result.

The time at which this incapacity ceases in the young, and begins in the old, is by no means fixed; but we can give a nearer guess at that epoch in the girl than in the old woman. Puberty commences in this country, with females, about the thirteenth or fourteenth year; but it depends greatly on constitutional habit, and modes of education: in other climates it is a good deal earlier, or a good deal later, according to the temperature. On the other hand, it is very uncertain when females cease to have an ability for sexual intercourse: they have continued to be prolific in some cases even to their fiftieth or fifty-fifth year.

(*b.*) *Anomalous Structure.*

Occlusion. — The most obvious physical cause of impotence in the grown female would be occlusion of the vagina, from whatever cause. There was an ancient practice (and, indeed, travellers inform us it is still observed in some parts of Africa) of preventing young women—slaves, for instance—from having connexion, by artificially producing this impediment. Inflammation, generally by the cautery, was excited in the labia, and the opposite surfaces were thus made to adhere: an operation afterwards being necessary before the generative act could be effected. There is a curious passage in the *Menagiana* on the subject, where it is said that this practice, familiarly termed *boucler les femmes* —is what was really meant by some old authors, who treated *de castrandis mulieribus.* It resembled the infibulation of boys, and perhaps was more properly of that nature, when performed, as it sometimes was, by sutures, or by rings drawn through the parts, still further secured by a lock. I may refer to an erudite note in Beckmann (Inventions and Discoveries, vol. iv.) where he treats on this point with his accustomed research, and traces the origin of the lock —the *cadenat des jaloux,* which some consider rather as an Italian than a French in-

vention. Brantome says that they were not much employed in France, *because the ladies soon found out how to make false keys.* And Bonneval tells us that, while in Italy, he once met with a lock of this kind, which he had long wished to see.

One remark more may be made on infibulation: it was practised in this country at one time, to prevent cattle from copulation. In Harvey, *De Generatione Animalium*, we have an account of a beautiful mare which was presented to the Queen, and which was infibulated—"ejus genitalia (ne ab equis admissariis inita, corporis gratiam atque equitandi usum amitteret) equisones, *ut fieri solet*, annulis ferreis infibulaverant;" but she was impregnated, and brought forth young notwithstanding.

But adhesion of the labia, causing at least temporary impotence, may occur in females from accidental inflammation; and such accidents are not uncommon in children. The hymen, also, may be of so tough a consistence as to defy any ordinary means of rupture. In all such cases, however, the assistance of surgery will remove the impediment to sexual intercourse.

Absence of a vagina.—The vagina is sometimes altogether wanting, or in so questionable a state as to preclude sexual intercourse. A remarkable example of this is to be found in a case quoted by Foderé, from the *Causes célèbres.* A female, aged 25, married; but six years passed away, and there was no consummation. It was now deemed necessary that her person should be examined by a midwife, who declared, that instead of external sexual organs, there was nothing to be seen but a solid body pierced by a small hole. It further was ascertained that the woman had never menstruated: but she had always enjoyed good health, notwithstanding. M. Dejours, a surgeon, who was called in, supposing the case to be one of simple occlusion of the vagina, proposed to divide the barrier, in hopes of reaching and laying open the cavity. He accordingly carried a scalpel to the depth of two fingers' breadth, but instead of reaching a vagina, he was still opposed by solid resisting parts. Finding this, he judged that he had nothing to hope for in going further, and that he should run great risk of wounding the bladder or rectum. He therefore contented himself with keeping open the wound by the introduction of tents, and this opening remained during life. Matters remained quiet for eight years, when the husband in disgust demanded a divorce: it was not granted—probably through the reporters holding out hopes of another operation being successful. The woman died at Lyons ten years afterwards, and on examination it was found that the place of the vagina and uterus was occupied by a hard compact substance, in which no cavity could be traced.

Dr. Beck cites, from the New York Medical and Physical Journal, a recent, and perhaps not less striking, instance of deficiency of the vagina. A woman, aged twenty-three, has been married upwards of two years: she has had excellent health, yet never menstruated. There is, however, about every twenty-eight days, a feeling of uneasiness about the pelvis, followed, for a day or two, by an active diarrhœa; and this she has experienced since the age of seventeen or eighteen. As no sexual intercourse could be effected, she consented to be examined; when it was found, that although the external parts were well formed, there was no vagina. About the usual situation of the hymen, there was found a complete septum. Imagining that this might be an imperforate hymen, Dr. Mott made an incision into it about an inch deep, but without success. He afterwards tried it to the depth of two or three inches; but still no trace of a vagina could be discovered. Dr. Mott suspects that the uterus, as well as the vagina, is wanting. The woman has never had the least sexual desire.

Excessive constriction.—As to extreme narrowness of the vagina, it can in general be scarcely considered as a cause of impotence. Besides that all conditions of largeness and smallness are merely relative, it is certain that art can do a great deal in remedying the inconvenience.

Benevoli was called upon to treat a married woman whose vagina had no larger calibre than that of a goose-quill. Every effort to dilate the part seemed fruitless. The parietes of the passage were of a scirrhous hardness. A divorce was about to be sued for; but the surgeon, by the employment of emollient fomentations, and the successive introduction of pessaries of gentian root (gradually enlarged), succeeded in ultimately rendering the part of the usual size.

There are, however, certain cases, it is said, in which, owing to excessive constriction and thickening of the parts, coition is totally precluded.

Yet it would appear, that even in the most unpromising cases of this kind, the natural powers, unassisted by art, may sometimes prove effectual in restoring the proper conformation. In the Memoirs of the Academy of Sciences of Paris, there is a case which confirms this view. A young woman, who married at sixteen, had the vagina so narrow as scarcely to admit the introduction of a common quill. At every successive menstrual period she experienced a painful tension of the womb; the catamenia flowed with difficulty; and

it was supposed that the upper part of the canal was still more constricted than the lower. Sexual intercourse seemed perfectly impracticable: yet, after being married eleven years, she proved with child, although the vagina still preserved its strait condition. That she could ever be delivered seemed now scarcely possible. Towards the fifth month of pregnancy, however, the passage began to dilate, and by the ninth it was of dimensions sufficient to allow the safe birth of the infant.

Irritability. — Excessive irritability of the sexual organs, attended with intolerable pain when coition is attempted, must be considered as in some measure a source of impotence, which it may be very difficult to remedy. Dr. Cockburn traced a case of this kind to internal hæmorrhoids, and removed the effect together with the cause. Mr. White is quoted by Dr. Paris, as having published three very interesting cases, in which the pain which accompanied the attempt at coitus was so acute, that the women rarely escaped fainting. Upon examination, the surgeon discovered in each of them a small fistulous opening, leading into a sinus of at least two inches and a half in length. The disease was attributed in each instance to a local injury having some years previously occasioned an abscess in those parts. This painful state of the vagina was entirely and permanently cured by dividing the sinus.

Total absence of external organs. — But where the external organs and the vagina are wholly wanting, there can be no hesitation in pronouncing for both impotence and sterility; unless, indeed, the latter passage have an opening somewhere else, as on the abdomen—at the navel, for example; or unless it communicate with the rectum. In either case it is possible — indeed it has happened — that women have conceived: and the question has even been proposed to the casuists, "whether, if a wife be so formed, it be lawful to have connexion with her?" Much heat and contrariety of opinion were displayed on this point, and a judicial decision in the negative was pronounced by a royal court of justice, at Treves. However, I shall quote for you a remarkable case or two.

M. Barbaut, in his Midwifery, relates that in two cases of communication of the vagina with the rectum, delivery was effected—once by a laceration which extended to the meatus urinarius; and in the other instance by an incision, which was requisite for the removal of the fœtus.

A young woman of Piedmont, who had no external genital organs, got married; but as her malformation was known, it was not suspected that pregnancy could possibly take place; and, consequently, some labour pains of which she complained were imputed to colic. Upon examination it was ascertained that there was *no trace* of the external organs of generation. It was thought that the pains were from retention of the menses. Professor Rossi (who relates the case) examined the rectum, and determined to make an incision in the natural direction of the vagina. He was much astonished on feeling with his finger, which he introduced into the wound, the membranous sac containing the waters lying over the opening of the neck of the uterus. The membranes at length gave way, the head of the child presented, and the labour was completed by the natural efforts. The new passage was kept open by means of a tube, distended with air after its introduction, so that the artificial vagina might be of the natural dimensions. Two years afterwards this female proved pregnant again, and was delivered by the new opening. The information gained from her husband led to a more careful examination of the rectum, and an orifice was found within the anus, which would only admit a small probe. This orifice communicated with the artificial canal made by the surgeon; and there could be no doubt that it was through it that the first impregnation had been effected. It is further worth observing, that the orifice did not pass in the direction of the opening of the cervix uteri, but formed an angle with the part*.

Absence of the Uterus. — The uterus may be absent: this is one of the physical causes of sterility, and perhaps the only one, which can be ascertained by actual examination; the vagina in such cases being a mere *cul de sac.*

There is a case related in Hufeland's journal, where Professor Stein, in proceeding to remedy what was supposed to be merely a constriction of the vagina, ascertained to a high degree of probability that there was no uterus present: the vagina terminated in a mass of cellular tissue. Dr. Stein quotes several instances of the same anomaly, which he found already on record.

In a female operated upon by Dr. Macfarlane, of Glasgow, for what appeared to be imperforate vagina, the thick muscular substance which formed the occlusion was divided, but without effect. The patient died, and it was ascertained that she had no uterus; but the ovaries were large and well formed, and the breasts fully developed.

It was Van Helmont's opinion that womanhood essentially depended on the womb—*propter uterum solum mulier est id*

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* Medical Gazette, vol. i. p. 133.

quod est; but the last case, as well as several others which might be quoted, shews that the external appearance and attributes of the sex cannot depend on that organ, but on some other, which is invariably present when a woman exhibits the sexual characteristics of voice, shape, habits, propensities, &c. Such an organ is the ovary, which bears an exact analogy in this respect with the testicle in the male.

Deficiency of the Ovaries.—Some remarkable instances are on record of one or both ovaries being wanting in females examined after death; but perhaps the most curious example of their absence is that related in the Philosophical Transactions for 1805, by Mr. Charles Pears. The woman in question lived to be 29 years of age, but had not grown after ten. She was only four feet ten inches in height, and had a very narrow pelvis as compared with the breadth of the shoulders. Her breasts and nipples never enlarged; nor did she ever menstruate, or shew any other sign of puberty, physical or moral. She died of chest disease. On examination after death, the uterus was found to be in every respect natural, save that its size shewed it had not enlarged beyond the infant condition. The fallopian tubes were pervious throughout; but the ovaries were so indistinct, that they "shewed rather the rudiments which ought to have formed them, than any part of their natural structure."

When the ovaries are deficient, we can very well conceive that they may entail impotence as well as sterility. In fact, persons in this condition are similarly circumstanced with eunuchs; for while the latter lose their sexual character and appetite, as well as power for intercourse, the former also are unsexed, and destitute of all reciprocal feeling. The woman just described by Mr. Pears "always expressed aversion to the familiarities of young men."

The difficulty respecting the ovaries in a medico-legal point of view is in making the diagnosis; for however we may ascertain in the living person the presence or absence of an uterus, we can scarcely hope to demonstrate the fact with regard to the ovaries, and can be guided by circumstances alone. It may happen that, in addition to the unfeminine characteristics of the individual, we may obtain cognizance of some disease of the abdomen under which she may have laboured, or of some accident which might have destroyed the vitality of one or other of the ovaries. Zacchia thinks that the loss of one ovary is enough to render a woman sterile, and that a female in such a condition is even worse off in respect to reproduction than a spado, who has only one testis.

In the passage where he expresses this opinion, Zacchia, by the way, speaks familiarly of the castration of females. He had mentioned just before, that it was an ancient practice in use among the people of Asia Minor, and, as he understood, prevailed in his day in some part of Germany. It is probable that, with respect to the latter circumstance, the shrewd old jurist was misinformed, and that the Asiatic practice was no other than that already alluded to, as consisting in producing occlusion of the vagina.

But there can be little doubt, indeed it is certain in some cases, that the ovaries have been actually removed. Mr. Pott removed them in operating for inguinal hernia, and a complete change came over the female so deprived. Before this period she was stout, large-breasted, and menstruated regularly; afterwards, although she enjoyed good health, she became thinner, her breasts were gone, and she never menstruated. Her age at the time of the operation was 23. De Graaf, referred to by Mahon (though I have not been able to find the passage in the treatise, *De Muliruum Organis*), mentions a German who cut both the ovaries out of his daughter, being provoked at her misconduct, and wishing to render her more chaste: and Boerhaave (quoted by Dr. Paris) relates the story of a sow-gelder in Spain, who, in a fit of passion, treated his daughter in the same cruel manner. In both instances the women seem to have escaped with life, but their sexual characters, it is said, were completely destroyed.

Other supposed causes. — Other reputed causes of impotence and sterility in women—such as prolapsus of the uterus, or of the vagina—need not delay us; they are so reputed without any sufficiently good reason: conception has been known to take place in such conditions of the female, as well as when fluor albus, immoderate menstruation, or even a carcinomatous state of the womb is present.

I have omitted for obvious reasons many of those organic causes of impotence and sterility, in both male and female, which are wholly internal, for they afford no indications to the medico-legal practitioner. They are in general not ascertainable until after the death of the individual, and mere suspicions in a case of this nature can be attended with but little practical utility.

Means of determining the question of Impotence.

The earliest provision met with for dissolving a marriage by reason of impotence, is in Justinian's code; where it is stated, that if the parties have lived

two years together without consummation, —*si maritus coire minime propter naturalem imbecilitatem valeat*—a divorce is to be granted. In a subsequent law, the time is extended to three years. But in what manner the old civilians satisfied themselves of the husband's incapacity appeareth not. It was the Canon law which introduced the mode of proof by personal inspection. The husband was inspected first, and if he appeared capable, the examination went no further: the woman (the complainant) was obliged to be silent. But if, upon inspection of the husband, there were doubts raised as to his ability, the wife was then inspected, provided she had not been married before. This method of inspection, too, was adopted by the Canonists as a sort of *dernier ressort;* for, in ordinary cases, the affirmation of the parties, with that of seven of their relations, was held sufficient.

The Congrès.—It remained for France to introduce the most disgusting and absurd mode of proof ever devised. This was the actual congress, which was commonly had recourse to for about a century and a half, but was at last abolished by a special law, in the year 1677. It is said that the number of divorces sued for and granted within this period, was greater than was ever before known. Women who wished to be divorced, and were aware of some apparent deficiency or diffidence in their partners, had only to challenge to the congress, and all the chances of victory were in their favour. There was one remarkable case, however, in which the lady was defeated. The circumstances of this case are illustrative of some points in the present lecture, and therefore may be, perhaps, not inappropriately introduced. The Baron d'Argenton was accused of impotence by his wife, in the year 1600: she had actually gained her cause before the Official of Sens, and afterwards before the delegates of the Primacy of Lyons. The Baron appealed from the sentence; he maintained that he *had* consumated the marriage, demanded that his wife might be inspected, and finally offered to accept the congress. Rouillard, his counsel, one of the most learned advocates of the parliament of Paris, published a capitulary on the occasion, proving "that a man born without any visible testicles, but having all the other marks of virility, is capable of the conjugal duties." This was the Baron's case. The tables were turned on the lady, who now declined either a congress or an inspection, as being equally repugnant to her modesty. It is scarcely necessary to add that she lost her cause. The able advocacy of Sebastian Rouillard, upon this occasion, was rendered memorable by the strong arguments adduced in favour of the congress; they were full of ingenuity, and deservedly admired for their wit and learning. But a greater advocate arose a few years after, in the person of Vincent Tagereau, who demonstratd in a very eloquent tract, (On the Impotence of Men and Women) that the method of proof by congress was both immodest and uncertain. Paré also wrote against the practice, and called loudly for its suppression. Nor was there, perhaps, a more efficient champion on the side of modesty than Nicholas Venette, a learned physician of Rochelle, whose work, entitled *Tableau de L'Amour Conjugal*, went through several editions. He denounced the *congrès* as "a pretence for a divorce, and the effect of the lasciviousness and impudence of women. They induce the judges to grant a trial, which is as precarious as it is indecent: for not one man in a thousand can come off successful from so public an ordeal."

The proceedings of the congress are variously described; some say that they were conducted with circumstances of disgusting indecency, under the immediate eye of the inspectors, (namely, the physicians, surgeons, and midwives, three of each, besides a magistrate); while others assert that the midwives alone were in immediate attendance, the professional men not being summoned until the moment sufficient proof was producible. Voltaire distinctly denies that there was any very indecent ceremony observed. "This proof," says he, "about which so much noise has been made, was not conducted exactly as people have imagined. It has been supposed that a conjugal consummation took place under the inspection of witnesses; but such was not the fact. The parties simply retired to bed, and at a proper time the inspectors, who were assembled in the next room, were called on to pronounce upon the case."

However this be, the *congrès* continued for half a century after the remonstrances of Paré, Tagereau, and others, and would probably have been retained longer by the law authorities, had they not been made ashamed of their conduct in a memorable case. The Marquis de Langeais, in 1659, was accused by his wife of impotence, and having accepted the congress, *failed*, as it is said, through the management of the lady. He demanded a second trial, but the judges refused, pronounced the Marquis impotent, his marriage void, forbade him to marry again, and allowed his wife to take another husband. The Marquis, however, disregarded one part of the sen-

tence; he married a Mdlle. de Navailles, and had by her seven children. His first wife having died, he appealed to the Grand Chamberlain against the sentence of impotency; whereupon this great officer, sensible of the ridicule of the whole affair, confirmed the second marriage, admitted the appellant's ability, and procured a law whereby the ceremony of the congress was ever after abolished.

The French law at present seems to have run into the other extreme: it is totally silent on the subject of impotence, obviously with a view to discountenance such a charge as a ground of divorce.

Mode of investigation in England.—Not so, as we have seen, in England; here impotency and sterility have long been admitted as sufficient grounds in nullity of marriage; and impotence, as we have further seen, is recognized by our ecclesiastical authorities, according as it is absolute or relative. The case of Lord and Lady Essex has been already alluded to; but the steps which were taken for the dissolution of their marriage are further deserving of notice. It was notoriously the wish of the lady to be divorced, in order to be married to her paramour, Viscount Rochester, the King's favourite. For this purpose she trumped up a charge of impotence against her husband, and so managed matters that he was effectually so in respect to her, and had no hesitation in confessing it, as he was anxious to get rid of a woman so worthless.

It was resolved, therefore, to proceed in accordance with the established practice. The parties had been married above three years, and the wife pleaded, that although she was *apta viro*, she was notwithstanding a *virgo intacta*; in proof whereof, she offered to submit to the requisite personal inspection. How the remainder of the proceedings were conducted I shall relate in the words of a writer of the period, merely observing, that there is no reason to believe that there is any exaggeration in what is asserted of the device adopted by the Countess. The partiality of the King was notorious throughout the whole affair; and the eagerness which he displayed in bringing about this adulterous union, which afterwards led to the murder of Sir Thomas Overbury, has left an indelible spot on his reign.

"The King commanded the bishops to sue out a divorce between the Earl and his lady, in order that the Viscount might marry her; for he had been practised formerly in Scotland, in his minority, with the like experiment. Elizabeth, daughter to the Earl of Athol, being married to the Earl of March, *under the pretence of impotency*, but merely for lust (as the author reports), was divorced from her husband, and married to the Earl of Arran, the King's favourite, who had been before a partner in her adultery.

"The bishops and others, having a commission under the great seal to convene the Earl of Essex and his Countess before them, sent out their summons, and they made their appearance accordingly. But before they proceeded, they caused a jury of twelve discreet matrons to be impannelled, *to search the Countess*, whether she were (as she pretended to be, and was reputed) a maid still; for if she were a maid, they would fasten upon a nullity, and so separate them for the more honour of her virginity. The Countess being ashamed [or afraid] to come to such a trial, would not expose her face to the light; but being to appear before the matrons, under a veil, another young gentlewoman, who had *less offended*, was fobbed into her place; and she passed in the opinion both of jury and judges to be a virgin. Then the articles were drawn up, where she accused her husband of impotency, whereby, &c. The good Earl, willing to be rid of so horrid a mischief, made an acknowledgment, upon which the judges proceeded to a divorce."

The custom in this country, in trying the incapacity of women, as well as of ascertaining whether they be, as they state, *intactæ*, still is, to submit them to the scrutiny of a jury of matrons.

The reputed impotence of men is generally referred to the investigation of inspectors chosen by the court, and duly sworn: these inspectors are generally two surgeons and two physicians; and such a jury has in several instances latterly been substituted for the absurd and ignorant jury of matrons.

German proceedings.—In Germany the usual method is to commit the investigation of the proofs to the recognized medical inspectors, generally an *Amt-Physikus* and *Amt-Chirurgus*, who draw up their report, and present it for adoption to the higher authorities. I have before me two of these reports, recently published by Professor Bernt, in his *Gerichtlich-Medicinische Gutachten*; but the extreme indelicacy of both forbids me to give more than the briefest sketch of their details.

In the first case, a man aged 48, being charged with impotence by his wife, a young woman of 18, the parties appear in person to be examined. The man has been already divorced from a former wife for inability; and his general appearance is unfavourable: short stunted growth; thin beard; high-toned voice; meagre shapeless limbs, &c. The sexual parts without being malformed, are excessively

diminutive—not larger, in fact, than those of a boy of twelve: the measurements I omit. This person states that he has strong impulses occasionally, and can perform his conjugal duties well enough; that his wife is only prompted to proceed against him by some malicious people, but he hopes to please and to satisfy her yet, &c. On examining the wife the next day, she proves to be a bouncing vigorous young woman, well formed in every respect, and exhibiting no marked appearance of having cohabited: no hymen, however, nor caruncule. The moral circumstances I forbear to enter upon. In fine, the examiners conclude that the parties are wholly unsuited to each other; that the young woman seems well adapted for having a family, but it is physically impossible (which, by the way, appears to be a little too strong) that the man can ever prove prolific.

The second case is one in which impotence was falsely imputed. The parties were married but a few days when the wife chose to decamp. The husband was thirty-one years of age, underwent the most minute examination of the inspectors, and was pronounced to be perfectly potent. Some of the interrogatories put to the husband by the Consistory Court of Weimar, in consequence of the depositions of the wife, are curious; nor are the replies less so. But I cannot venture to notice them further.

Practical rules.—In proceeding to examine alleged cases of impotence, it may be as well to observe a few plain rules, which may be useful to us, and expedite our researches.

1. We should note the age of the parties, and particularly of the individual complained of. The general appearance, the habit of body, and state of health, should be observed. And we should ascertain what diseases the person may have previously laboured under.

2. The sexual parts must be carefully examined with regard to mal-formed, deficient, or redundant structure. The urethra of the male should be sounded, and the condition of the prostate explored.

3. All manipulations of a gross or indelicate kind should be carefully avoided: they are wholly unnecessary, when there is sufficient opportunity for other examination. It can scarcely be mentioned without disgust, that it is the custom in some of the German states—Wittemberg, for example—to require the professional inspector to lie for some nights in the same chamber with the suspected party, in order to ascertain, by immediate and ocular evidence, whether there be occasional erections! Yet Henke thinks well of this practice.

4. No artificial stimulus should be employed. It is a strange proceeding, and surely very reprehensible, for certain medical jurists to recommend the use of provocatives, by way of giving the accused a full and sufficient trial. Even Haller himself suggested that tincture of cantharides should be administered; and others have prescribed the cold-bath, warm vapour, electricity, and *nettles*.

Lastly, Physical causes are those which we should chiefly endeavour to ascertain; and those of an enduring character more particularly deserve our best attention.

The main question, be it constantly kept in mind, is, whether the party be *actually* impotent, and *how long*? For, as I mentioned before, if it be sought to procure a divorce, the bodily infirmity complained of must have existed *previous* to the marriage contract: if it originated *after* marriage, it is no ground of divorce or separation, for the end of the contract may have been answered—namely, the procreation of children.

Erratum.—In last lecture, p. 263, last line but three, for "unlawful," read "lawful."

DETERMINATION OF THE QUESTION, WHICH ARE THE NERVES OF TASTE?

By B. Alcock, M.B*.

My attention having been particularly directed to the physiology of the fifth nerve, the uncertainty in which the relations of the sense of taste have remained, even to the present time, has led me into a series of investigations, the results of which, I hope, will be considered worthy of being submitted to the profession.

The first question relating to the sense which engaged my attention, was the determination of the doctrine of Panizza, that the glosso-pharyngeal nerves are the special nerves of taste.

The name of Panizza is so eminent, and his statement so circumstantial, and stamped with candour, that one must hesitate to call his opinion into question: however, it is so opposed to received doctrines that I determined to repeat the experiments upon which it has been founded.

The following are the results which I have obtained from the division of the lingual branches of the fifth, and of the glosso-pharyngeals; 1st, after the section

* From a paper read at the Bristol Meeting of the British Association, August, 1836; here condensed from the Dublin Journal of Medical Science, for November.

of the former, the animal lost the tactile sensibility of the tongue, and retained the sense of taste; but, though it tasted, it appeared evidently to be by other parts of the mouth, and it seemed equally plain that it had lost the sense in the anterior part of the tongue, at least; for after it had been trained to suffer its mouth to be opened, quietly, and to have something laid upon its tongue, it allowed the pure coloquintida, moistened, to remain so long upon that part of it, care being taken to confine it to it, that no doubt could remain that the animal did not taste by the organ at its anterior part; but as soon as it was let go and closed its mouth, it displayed at once its sense of the taste by the ordinary indications. The inference therefore of Panizza, that taste continues *unimpaired* in the tongue after the section of the lingual branches of the fifth, is in my opinion incorrect; so far at least as it is understood in an unqualified sense, and its application extended to all parts of the organ. 2nd. I have divided both glosso-pharyngeals in several dogs, with the following results: in two of them, each time that either nerve was taken upon a hook, preparatory to its division, a most violent action of the pharyngeal muscles was excited, resembling precisely the pharyngeal effort to reject the matter, which most persons must have experienced, when something nauseous or revolting has got beyond the power of the tongue, and entered the pharynx; and it was so imperative, that the animal struggled to get upon its feet, and was with difficulty restrained. In a third, a similar effect, only less marked in degree, was produced, by pulling upon the nerve with a ligature passed underneath it; and in one of the three the root of the tongue was at the same time depressed, and rendered concave from side to side. In three of the animals, muscular startings occurred in the throat, while the nerve was held upon the hook; but the phenomenon just described did not, at that time, take place. In one of those the startings were strong and repeated; in the others, though obvious, they were less remarkable; and in one also, as has been mentioned, the first effect described was caused by pulling upon the nerve. In all but one, the animal displayed much suffering from stretching, pinching, and division of the nerve. In every instance deglutition was more or less impaired; I say more or less, because in my first attempts I did not succeed perfectly in dividing the nerve, but only its pharyngeal division; and this occurred in the animal which I presented to the Surgical Society of Ireland, during the past session; as I afterward learned from dissection: in that instance the animal required at times repeated efforts in order to get a morsel down; though at others it appeared to swallow with tolerable freedom. But in those instances in which the nerves were perfectly divided, deglutition was so very much interfered with, as in some cases to be impossible: the animal took, and masticated the morsel as usual, and swallowed it from the mouth into the pharynx freely; but then, after repeated and unavailing efforts to get it further, it made equal efforts to get it back again, in which it often experienced so much difficulty, as to become much exhausted, or to seem even in danger of suffocation, before it succeeded. Yet even here the animals, under certain circumstances, were able to get food down—meat in small bits and moist—but if either in large bits or dry, it would not pass. Panizza's conclusion, therefore, with regard to the influence of the nerve upon deglutition, as also that with regard to its sensibility, appears to me as incorrect as the former.

The power of the animal still to swallow, may be readily explained by reference to the mechanism of deglutition; which process consists not of a single act, but is accomplished by a succession of actions in the several successive portions of the part of the intestinal tract engaged in it: hence, where no difficulty exists, the loss of action in one part, the pharynx, may be compensated by the action of the part immediately behind it—the mouth—which may suffice to propel a morsel through the former into the œsophagus, and this effect will be favoured by the natural tendency of the matter to descend; but where, from any cause, the pharynx is called on itself to act, then difficulty arises.

Lastly, the animal's taste did not appear, to say the least, much affected: even immediately after the operation, when exhaustion renders it in general very indifferent, it unquestionably tasted the coloquintida introduced into its month,—in one to such a degree, that efforts to vomit were excited by it,—and when food embittered with it was offered to the animal, it rejected it, though it appeared to me to manifest less aversion than previously. In those experiments, as much as could be of the nerve was in each removed, to provide against reunion. The inference from them, as regards taste, is obvious; that the glosso-pharyngeal nerves, if connected at all with the sense, are not the sole or special media of its perception.

How, then, are the results of Panizza's experiments to be explained? This task belongs properly to another; but justice to my own induces me to suggest two sources of fallacy, by which he may have been misled. I cannot, in the first place,

believe that he operated on the glosso-pharyngeal nerve; and failed to find it sensitive, or to influence muscular action; yet he asserts that it is devoid of both properties; or that he divided the nerve completely, and that afterwards deglutition was perfect. Indeed, from my own experience of the operation, I should say that no one, who makes the experiment once only, or for the first time, is likely to succeed in his purpose, inasmuch as the lingual division of the nerve is so close to the base of the cranium, is so short, and runs so directly inward away from the pharyngeal, that it is almost certain to be overlooked, until, after having, as he thought, cut the nerve at its exit, the operator finds on dissection *post mortem* that he has left the lingual portion untouched; and from a comparison of my experience with the history of the operation given by Panizza, I can hardly hesitate to assert that he did not reach that portion; else he would not have omitted to mention a source of failure the most remarkable in the case: again, he makes no reference to the external carotid artery, which is situate between the surface and the track of the nerve, and which it is, in my opinion, necessary to tie with a double ligature, divide and displace, in order to allow sufficient room, and to guard against hæmorrhage. If not the glosso-pharyngeal, then, what other nerve could it have been? It might be the superior laryngeal: indeed, this nerve is situate so near to the other, that it has very frequently presented in the course of my operations; and I have been for some time uncertain which of the two it was: it is doubtless somewhat lower and somewhat more superficial than the glosso-pharyngeal; but it will be readily understood, that with a deep wound, and a trying operation, the difference in both respects might be easily overlooked. Again, I have not found, in the trials I have made, the superior laryngeal display either of the disputed properties; and, if this conjecture be correct, we can explain how he may have divided, as he thought, the former nerve; and found it devoid both of sensibility and of muscular influence. In the second, beside the acknowledged power of hunger, I have found that some dogs are naturally so devoid of taste, that a conclusion could not be safely drawn with regard to that sense, from the result of any experiment upon them; and I have actually rejected a dog as an unfit subject on that account: the animal ate, uninjured, with avidity, food, which others, naturally voracious, rejected with disgust: and taste might have easily seemed obliterated in it after the division of the glosso-pharyngeals.

It being then, as it appears to me, satisfactorily proved by the preceding details, that the glosso-pharyngeal nerves are not the special media of taste, we are thrown back again upon the fifth nerves, to which it has been generally attributed. But if *they* be the media, with which of their branches is it associated? or, is it restricted to particular branches? The linguals are those which have been generally considered the nerves of the sense; whence they have obtained the name of "gustatory." Several considerations, however, cast a doubt upon that opinion: first, if they be nerves of taste, they certainly are not the sole; since it continues after their division; and secondly, if taste be a faculty derived from them, it might be expected that all parts of the mouth supplied by them should possess it; but they give filaments to parts which are not seats of taste, and thus, while they are proved by the first not to be the sole, the second throws a doubt upon their being nerves of taste at all. Again, in the section of the lingual branch of the fifth, that of the chorda tympani is necessarily involved, and the effect consequent on the division of the former may be due to that of the latter; while it is one of a set, and the only set, of nerves distributed from a common source to the seats of taste in the human subject, viz. the branches of the spheno-palatine ganglion. Those considerations—to which is to be added that suggested by Mr. Noble, that no other function has been with any degree of certainty assigned to the cord—appeared to me so forcible as to induce me to adopt the opinion, that the ganglion and its branches are the source and media of taste to the tongue and fauces, the seats of the sense in the human subject at least. The same opinion has been already suggested by Mr. Noble of Manchester, and advocated by him on rational grounds. Bellingeri also maintains the doctrine that the chorda tympani is the source of taste; and it appears further to have been adopted by Magendie; inasmuch as we have been lately informed of his removing a defect of taste by passing a galvanic current through the course of the cord. To the doctrine two objections, however, present themselves: viz. that the branches of the spheno-palatine ganglion are distributed to other parts beside the seats of taste—the nose—and that even its palatine branches cannot all be considered nerves of the sense, since we do not taste with the hard palate; and hence either taste is not a special sensation, or those are not its special nerves. On the other hand, those objections might be removed by the principle, too much disregarded in our reasonings upon the source of sense, that

peculiarity of sense may be equally, or even more, the result of peculiarity of organization in the organ, as of peculiar nerves; and experiment alone offered a prospect of solving the difficulty.

But how experiment upon the sphenopalatine ganglion and its branches? Notwithstanding the apparent impracticability of it, it occurred to me to attempt the removal of the ganglion from the dog, and thus directly decide the question. In this design I was encountered at the outset by the authority of Magendie and Desmoulins, according to whom neither ganglion nor chorda tympani exist in that animal. On dissection, however, I ascertained with great facility that both do exist, and not only in the dog, but also in every one of the individual mammalia from which they expressly state that the parts are absent. Further, I learned that the dog presents a most felicitous opportunity for determining not only the influence of the ganglion upon taste, but also its relation to the fifth nerve. In the human subject, the ganglion exists upon a branch of the nerve; and hence it has been, for the most part, assumed and described to be a part of the fifth; but in the dog it does not engage the nerve; it is separate, and is only attached by its anterior extremity to the naso-palatine branch of the second division; while its posterior gives off, or receives, as it may be, the chorda tympani: its characters, too, are altogether different from those of the branches of the fifth. It is thence manifest that it cannot be regarded as an essential, original, or necessary part of the fifth, but only an adjunct, and pretty certainly a part of the sympathetic system; with the main portion of which it is connected by one of its posterior filaments.

After several attempts I succeeded—and for the accomplishment of the experiments which I am about to relate, I take this opportunity to make my acknowledgments to the two friends who assisted me; Mr. Williams, Lecturer on Chemistry, and Mr. Thomas Hart, Conservator of the Museum in the Medical School, Park-street; without whose patient, cordial, and judicious co-operation, as well in them as in my other experiments my attempts must have failed—I succeeded in the removal of the ganglion from both sides. In order to do so it is necessary to open the zygomatic fossa, by displacing the zygomatic arch, and the coronoid process of the lower jaw, with the insertion of the temporal muscle; that done, the superior maxillary nerve may be exposed, lying upon the pterygoid muscle; and on drawing aside or raising the nerve, the ganglion will be found beneath it upon the muscle: the deficiency of the wall of the orbit, and the consequent size of the fossa, afford abundant room for accomplishing satisfactorily the several steps of the operation.

I have thus twice extirpated the ganglion from both sides; and in both instances the animals tasted acutely afterwards. We must then abandon, as groundless, the idea that taste depends, whether for its existence or perception, upon the presence of the ganglion or the chorda tympani, and seek another office for those parts.

The conclusion that taste is independent of them, is confirmed by the existence of the sense, to a very high degree, in animals in which neither ganglion nor cord has been discovered,—for instance, birds; and if those parts have any connexion with the sense, it must be by some other relation than that of the media of perception. That they have a connexion I am strongly disposed to think, because in the animals in which they exist, they are connected especially with those nerves, which will presently appear to be at all events the chief media of perception to the sense; and because, where they are absent, the seats of the sense are probably less numerous, and the apparatus more simple. It is necessary to suppose the existence of some superadded provision, else how is the sympathetic action of the several parts of the apparatus—for instance, the rapid flow of saliva from the impression of a sapid agent, to be explained? but at present this is but speculation, and premature.

It next occurred to me that taste, whatever be its real nature, may be a sensation perceived through the ordinary nerves of the parts where it resides, viz. the palatine and lingual branches of the fifth; and that the question might probably be decided by the section of those branches. For this purpose, the dog also offered a favourable subject, inasmuch as an interval of some lines exists between the origin of the naso-palatine nerve, and the attachment to it of the extremity of the ganglion; and thus an opportunity was afforded of cutting the nerve between those points, without interfering with the ganglion or its connexion. I performed the experiment in two modes: in two dogs I simply cut the lingual branches below the jaw, and the palatines at the interval described, by which proceeding the influence of the ganglion over the latter was not interrupted; and in two others, at the same time that I cut the palatines, I also removed the ganglion; and in both cases the result was *quam proxime* the same, viz. that taste was very nearly obliterated, though sufficient evidence of its presence was still manifested to compel me to admit its existence. The effect produced was, that the animals, which had pre-

viously displayed the usual disgust at the coloquintida, no longer manifested any, but only ceased to eat food embittered with it: they would eat several bits in succession, and then refuse to take more, or drop the bit, taken, from the mouth, and take presently a clean bit if offered to them.

I examined two of those animals—one of each—after death; and I found the nerves so fairly divided, that the experiments appear to me unexceptionable. I must also add, that they were accomplished without injury to any other nerve than those mentioned, with the exception of the masseteric branch of the fifth, and part of the superficial temporal, which were of necessity divided; but neither the buccal branch, the infra-orbital nerve, nor the portio dura, was injured. All positive conclusion from them must therefore apply to the palatine and lingual branches of the fifth. They confirm, in the first place, the conclusion already drawn with regard to the ganglion and the cord. In the second, they prove positively that the palatine and lingual branches are, in the mammalia, media, and probably the principal media, of taste; so much so, indeed, that in the first instance, in which the experiment was made after the first method, and in which the palatines were divided on both sides within the same day, the dog seemed absolutely indifferent to a strong solution of the coloquintida poured in quantity into the mouth and fauces; but the animal had received a severe shock, and that the *absolute* indifference to the bitter was due to the shock, appears to me satisfactorily shewn by the result of the experiment when differently conducted, *i. e.* when an interval of several days was allowed to intervene between the two operations; in which case the effect was such as has been detailed. It should be known, in order to complete the latter inference, that as, on the one hand, when the lingual branches alone are cut, taste seems impaired; so, on the other, the same result is obtained, when the palatines are the nerves divided; a fact which I have had an opportunity of witnessing in the course of the preceding experiments. In the third place, they shew, that it is as branches of the fifth nerve itself, and not in virtue of their connexion with the spheno-palatine ganglion, that the palatines act as media of taste. And, lastly, they indicate, in the subjects of experiment at least, another medium.

For the performance of this office, two sets of nerves offer: either the other branches of the fifth, distributed to the mouth, or the glosso-pharyngeals. There does not appear reason to suppose that the former take part in the function; because, first, in the human subject, in which alone we can hope to be able to decide the point, taste is certainly not enjoyed by other parts of the mouth than those already mentioned; and therefore other branches of the fifth than the palatine and lingual are not likely to be connected with it; and secondly, because in some of the experiments upon those, the buccal branches also have been divided, and the result was the same. There remain, then, only the maxillary branches, and the filaments of the lingual not distributed to the tongue, and, they being likewise consumed in parts devoid of taste, it is to be inferred that they also are not associated with it. On the other hand, the manner in which the glosso-pharyngeal nerves are distributed in all animals, but more particularly in birds, and especially in parrots, can leave no doubt that they fulfil in all a function of sensation; and as well the manner of distribution, as the disproportion between them and the lingual branches of the fifth in the parrot, which manifestly tastes by the tongue, would lead to the inference, that in that bird the glosso-pharyngeals are the chief, perhaps the sole, nerves of taste to that organ; and here again experiment alone can decide. This might probably be accomplished upon the parrot; but I have not had an opportunity of attempting it. I have, however, succeeded, I think, in determining the point upon the dog. In one, upon which I had before divided the palatine and lingual branches of the fifth, on both sides, with the effect already described, I afterward cut the glosso-pharyngeals also; and I believe, so far as a single experiment can decide the question, that the animal was then absolutely tasteless. On the fourth day after the operation, I tested him with the coloquintida twice within a few hours, and each time he ate, without hesitation, a meal of meat containing so much of the bitter, that I fear it caused his death: at all events he sickened, an hour or two after the second meal, and did not recover.

My experiments, therefore, justify the inference, on the one hand, that the sensation of taste is perceived through more nerves than one, and, on the other, that the glosso-pharyngeals, though not the sole or special media of its perception, have yet a part in the function, and that they are nerves of taste as well as the lingual and palatine branches of the fifth; and if this conclusion be confirmed, the difficulty furnished by the disposition of the fifth nerve in inferior animals, as an objection to its gustatory functions, is still further removed; and we may feel at liberty to estimate the

relative gustatory properties of the two nerves according to their relative development and distribution. The result just stated, further, furnishes a possible solution of those obtained by Panizza, supposing him to have operated on the glosso-pharyngeal nerves; inasmuch as were the faculty, as exerted through the fifth, weaker, and that through the other nerves more active in the subjects of experiment, the result might be easily explained; but I must repeat, that I incline to the opinion, that he either did not operate on those nerves, or that, if he did, he divided only their pharyngeal portions.

In conclusion, I feel justified in drawing the following inferences from the experiments and reasonings which have been detailed: 1st, that taste is a special sensation; 2d, that it enjoys two media of perception; 3d, that its media of perception are the glosso-pharyngeal nerves, and the lingual and palatine branches of the fifth nerves; 4th, that the glosso-pharyngeal nerves are not its special media; 5th, that the latter nerves both are sentient, and influence museular action; and 6th, that the spheno-palatine ganglion and chorda tympani have no influence upon either the existence or perception of the sense.

ON THE EMPLOYMENT OF TARTARIZED ANTIMONY

IN INFLAMMATION OF THE MUCOUS MEMBRANE OF THE LUNGS.

To the Editor of the Medical Gazette.

Sir,

I have inclosed the following case as an instance of the decided effect of tartarized antimony in allaying inflammation of the mucous membrane of the lungs. Hitherto the use of this medicine has been, in a great measure, restricted to cases of inflammation of the cellular texture of the lungs; and even in these cases its use has not been so general as the statistical report contained in the Gazette, vol. ii. p. 191, with other unimpeachable documents, would justify. In fact, there is but one solitary circumstance which contra-indicates its use—viz. an irritable state of the mucous membrane of the alimentary canal; and the symptoms of this affection are so palpable that the slightest observation will detect it.

Without entering upon the question whether bronchial inflammation be an exciting cause of tubercular phthisis, (an opinion, however, which has been decidedly negatived by M. Louis,) it will not be disputed, that in this country, particularly in our large towns, a considerable proportion of the cases of acute and chronic bronchitis occurs in persons who give every indication of a prevalent tubercular diathesis, so far as we can judge from a general want of tone, with absent or distant respiratory murmur under one or both clavicles; and in these cases, the removal of inflammation by active depletion, or mercurial action, is frequently followed immediately by the rapid development of tubercles. The tartar emetic treatment, under such circumstances, will, I am sure, be prized by those who have an opportunity of witnessing its marked results.

Another object in sending the case, is to introduce to the notice of the profession a preparation which has not, so far as I am able to learn, been yet used in this country; but which will, I am convinced, be numbered amongst our valuable therapeutical agents, so soon as its beneficial results are more extensively known.

On a future occasion, I hope to have the honour of submitting to your notice some cases illustrative of the action of the bromide of iron on the processes of absorption and nutrition. These cases, however, contain nothing more than an account of results. Our knowledge of the physiology of nutrition is at present so limited, that any reasoning on the pathology of that function must be purely hypothetical, and therefore unsafe.—I beg leave to subscribe myself,

Sir,

Yours very respectfully,

Geo. Kemp, M.B.

Cheshunt, Herts., Nov. 12, 1836.

October 26, 1836.—E. Huntley, æt. 27, cook, has been suffering for the last week from a severe cough, with which she has for some years been frequently harassed. On account of the great distress occasioned by speaking, I am unable to obtain a connected history of her case, but learn from her sister that she has been under the care of a medical man in the neighbourhood for the last few days, who applied a blister to the chest, which is still open, and that yesterday she was attacked with shivering;

since which time the cough and dyspnœa have much increased.

At present (3 P.M.) the difficulty of breathing is very considerable, the countenance anxious and flushed, the lips livid, and the cough incessant. Pulse 120, irritable; expectoration excessively viscid. She does not complain of pain in the chest, and can bear firm pressure in the intercostal spaces.

Percussion elicits a dull sound over the whole chest, and the stethoscope discovers every modification of mucous râle, both anteriorly and posteriorly, with crepitant râle over a small space in the left infra-clavian region.

From the history of the case, so far as I could obtain it, the general appearance of the patient, and the situation of the crepitant râle, I presumed that a tubercular diathesis existed, and preferred the tartar emetic treatment to blood-letting, or exciting mercurial action.

Half a grain of tartar emetic was accordingly ordered to be taken immediately, out of camphorated water, and to be repeated every four hours.

27th.—Unable to see her till 8 P.M., when I found her much better in every respect. She complained of nausea, but had not vomited; pulse 80, soft and compressible; cough less frequent; expectoration less viscid, and beginning to assume a detached rounded form. Mucous râle still considerable, but the crepitant râle has disappeared. She was directed to continue the tartar emetic.

28th, 11 A.M.—The cough has not troubled her much during the night. The last dose of the tartar emetic occasioned vomiting. Mucous râle much diminished. The tartar emetic to be discontinued; and as the bowels are rather constipated, one ounce of castor oil is directed to be taken immediately. Four grains of James's powder are directed every four hours.

29th.—Much better; has only coughed two or three times within the last twenty-four hours.

30th, 9 A.M.—A remission of inflammatory symptoms occurred this morning about 4 o'clock; the cough has been very frequent since that time. At present the dyspnœa is considerable; the mucous râle is prevalent over the whole chest, but no crepitation can be discovered. The expectoration has again become extremely viscid and transparent; pulse 90, irritable, but yielding to pressure; tongue furred, but red at the margin. She does not complain of any pain in the chest, but the mucous membrane is so irritable, that every effort to speak occasions cough. One grain of tartar emetic is ordered immediately, to be repeated every four hours. A blister is also directed to be applied over the sternum.

5 P.M.—Having just taken the tartar emetic, complains much of nausea, but there has been no actual vomiting; cough less troublesome. Pulse 80.

31st, 10 A.M.—Has slept well; the cough is considerably less troublesome, and the expectoration having again assumed an opaque appearance, is rejected in distinct pellets, with little effort. Pulse 80, soft and compressible. The mucous râle is not extensive, and constantly shifting; the tongue is slightly red at the margin, and the last dose of the tartar emetic occasioned vomiting; it is therefore discontinued.

Nov. 1st.—All inflammatory action has apparently subsided; the respiration is in many parts of the chest quite healthy; it is, however, indistinct under both clavicles, particularly the left.

2d.—The patient now complains of nothing but debility, and having previously seen great advantage derived from the use of the bromuret of iron, in cases where a tubercular diathesis appeared to exist, she is ordered to take a grain and a half three times a day, dissolved in distilled water.

This preparation is analogous in its effects to the ioduret of iron, which is certainly one of the most valuable tonics we possess. One great objection to the administration of the ioduret exists in the circumstance of its undergoing rapid decomposition immediately on its being exposed to the atmospheric air. The bromuret may be kept in a state of solution with distilled water for many weeks, without the occurrence of any appreciable decomposition. The solution is the only form in which this salt can be given, on account of its great deliquescence. I have generally ordered it in a solution of the same strength as Dr. Thompson's solution of the ioduret, viz. three grains of the bromide to a drachm of distilled water, of which thirty minims are taken at first twice, and subsequently three or four times a

day, the patient being careful to keep the bowels regulated by means of castor oil.

As I have had great difficulty in obtaining the preparation in London, I may just mention that it has been very carefully prepared for me by Mr. Johnson, chemist and druggist in this place.

THE

PHYSIOLOGY OF SALIVATION.

By T. G. Hake, M.D.
Physician to the Brighton Dispensary, &c.

There has been no greater impediment to science than the mind itself, which, instead of calmly awaiting the results of its researches, glides anxiously forward in anticipation, and, in so doing, passes over the truth, which was too simple, too similar to the things amid which it lived, to be observed. So vast is the range of thought, that if it stray beyond the boundaries of its subject, as liable to do, it unconsciously betrays itself into remote analogies, which perform their functions apart, and are too beautiful, perhaps, to be refused in illustration of an inquiry which the intellect may have proposed to elucidate.

In the sciences connected with physic, as in all other things, the many are influenced by the few; and the creeds of the medical world may be traced to sources which are limited in comparison with the numbers who adopt them. It is the province of some to collect the most perfect facts, concentrating all their reason in vision—these are the working classes of philosophy; and of others, to mentally resolve facts into their elements, and at one glance to compare them with all knowledge, in order to detect a way through those labyrinths, which afterwards they have to traverse.

In physiology, this influence of the few is yet more strongly felt than in physic, for he who carefully practises the latter art arrives so nearly at general principles, by the experience of a constant return of like facts, that truth may be said to have taken a hold on the instinct before reflection has confirmed it, and only awaits the approval of authority or reason, to be changed from a sentiment to a perception of its reality.

But in physiology, because men do not perpetually reflect, the inexperienced mind is very apt to be seduced. The details of this science are hidden from us, so that facts the most uninteresting are received, and theories the most inappropriate adopted, to swell its annals.

The writer of this paper has before defended the absorbent system against those who would render it accountable for the mischief produced by many poisons, whose action is transmitted by the nerves; he will now, therefore, preface his theory of salivation with a view only of the manner in which the venereal virus acts, and mercury, the cause of ptyalism.

The great functions of a nervous system are produced in the extremities of nerves; they may be impeded by interruptions in the trunk, but the performance of the grand duty resides in the terminal branches, where they expand into the membranous form, and mingle inseparably with the tissues which they govern.

By means of a nervous system, the disorders of one organ may be translated to another, similar in structure, their sources of nervous power being related.—On this principle becomes explicable the venereal progress: it commences in mucous membranes, and, through its nerves, attacking the glandular structure of the part, excites derangements in adjacent glands, or confining itself to mucous structure, affects distant mucous tissues.

But mercury, similar in its mode of action as regards the system which it affects, has a directly opposite effect to the venereal virus; the one being permanently sedative, the other stimulant in its powers. Mercury pursues the same track in supporting, as the virus does in undermining the nervous system; and so far does this analogy extend, that the depression consequent on mercurial action disorganizes, when pushed too far, the same tissues as those which suffer from the virus, and causes the like affections; such, for example, as glandular enlargements, ulcerations, and cutaneous eruptions.

When mercury is internally administered, in quantities proportionate to the final causation of ptyalism, the following

processes occur. A stimulant acts by contact with the expansion of sympathetic nerves on the stomach and intestines. As it is propelled along that diversified line of organization, it acts on all its functions in a similar manner, but with different results. In the duodenum it urges the nervous battery with which it is in contact to increased power, stimulating the very glands themselves, whose ducts open into the upper bowel, and so causing an increased secretion and outpouring of pancreatic juice and bile; the same being produced through the medium of nerves extended between the mucous surface and the glandular bodies whose function is to secrete these fluids. In the meantime, the mercury being pursued, its impulse reaches the remoter parts of the sympathetic system, and on its terminal branches, the expanded seats of function, acts. The secretions are now more plenteous, and the solids are absorbed, but the principal change which is taking place in the system at this stage, is the provision instituted in the the blood to meet the great demand for bile and pancreatic juice, the general harmony of the secretions having been compromised by the specific action of the stimulant on the hepatic and pancreatic glands.

The bile being excrementitious, the system can meet its increased secretion to only a limited extent. The quantity of this fluid existing in the blood in an elementary state may for a time answer the demand made in the duodenum, and the solids yielding to the absorbents may prove a further resource; but this can continue only so long as the sources of bile are not dried up. But, fortunately, organized matter not only becomes insensible to every stimulant after a certain duration, but even depressed below its standard tone. In accordance with this principle, the liver refuses to overact its part before the scarcity of its secretion is appreciated in the system. The pancreas, on the other hand, secreting a fluid easily yielded by the arteries, and daily replenishable from that inexhaustible source, the food, bears the mercurial impulse longer, and when at length it becomes insensible to the stimulant, the habit of elaborating pancreatic juice, or rather its components, in the blood, is established, and maintained by the tonic action which the mercury still supports in the absorbent vessels.

It now appears, that the action of mercury, primarily on the pancreas, and secondarily on the absorbents and lacteals, causes the circulation to be overloaded with an excess of pancreatic fluid, which does not find egress at the pancreas any longer, that organ being unable in its depressed state, the consequence of over-excitement, to secrete even its usual quantity of fluid. It is essential, however, to the equalization of the secretions, that this excess of abdominal saliva should be evacuated, as long as its production continues. It therefore becomes a question, through what channel it may be expelled; and as the salivary glands, that is, the parotid, submaxillary, and lingual, are similar to the pancreas in structure, and the fluids which all secrete are nearly alike—moreover, these former organs having received the mercurial impulse subsequently to the pancreas, and being consequently under its influence, while the pancreas has sunk into its atonic state—they are in every way adapted to relieve the blood of its excess.

It is not thus maintained that pancreatic juice, but that saliva, is evacuated by this system of glands, for the former contains ingredients which probably the latter does not. For these there are uses in the system, they being animal matter; they may be deposited for use, or evacuated through other channels; while the salts, in a state of solution, are plenteously excreted at the salivary glands.

This is the physiological history of salivation.

CASE OF
FISTULA LACRYMALIS,
TREATED AFTER DUPUYTREN'S METHOD.

To the Editor of the Medical Gazette.

Sir,

The question has often been asked, what becomes of the tube, (that so extensively used by Dupuytren) after it has been passed into the nasal duct, in cases of fistula lacrymalis? The difficulty of tracing these cases to a termination has, doubtless, stood in the way of a satis-

factory answer. The following case will, at least, answer for itself, and will prove that the termination of such cases cannot always be so favourable as is sometimes stated; although, for aught I know to the contrary, it may still be considered as efficient a mode of treatment as any other with which I am acquainted.

Mrs. S. consulted me in July, 1833, complaining of considerable irritation in her right eye, tumefaction over the situation of the lacrymal sac, and a continual flow of tears and mucus down the face. She had been annoyed in this manner for some months, the integuments over the sac becoming swollen, inflamed, suppurating, and then gradually subsiding. The disease returned periodically, and always about the time of menstruation. The simple antiphlogistic treatment was at first recommended, with temporary relief. The affection continuing, it was thought advisable to introduce the style into the nasal duct, which I did without difficulty. This she wore for about six months, at the expiration of which time she expressed a strong desire that something more might be done, as the tears continued to run over the cheek, so as to torment her considerably, although her sufferings had, on the whole, been much lessened.

To gratify this desire, I thought it proper to remove the style, and to insert instead of it one of the silver tubes. This was accomplished with great facility, so slight was the obstruction. On the next day the aperture had healed over, there was nothing visible, and she expressed herself very comfortable. She continued to go on well, and soon ceased to complain. The tears now passed off through the duct, and she expressed herself highly delighted with the result of the treatment, considering herself as cured. From this period I saw her occasionally, and she continued to regard herself as quite well, until about six or eight months since, when she again began to complain of uneasiness in the corner of the eye, and said, that on blowing her nose she thought she perceived the motion of the tube. There was a degree of tenderness and watery state of the eye, and a small capillary aperture was visible, just over the sac, through which the lacrymal fluid appeared to ooze.

Not perceiving that any thing more could be done, I advised her to wait patiently, until some further change was observable. About two months since, she was startled one morning, while lying in bed, at experiencing a sudden sense of choking, as if from some foreign body in the throat, and which, when ejected, proved to be the remains of the tube which had been introduced into the lacrymal sac *three years before.*

I found that a considerable portion had been corroded—more than one-half—the broad upper portion being entirely gone, or else separated from the lower, and remaining behind. She expresses herself easier since it came away, and has not much to complain of, except the discharge of the tears through the little fistulous opening in the sac, which, however, is not very distinct.

I am, sir,
Your obedient servant,
JOHN WALKER.

Manchester, Nov. 17, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Hygiène Publique; ou Mémoires sur les questions les plus importantes de l'Hygiène appliquée aux Professions et aux travaux d'utilité publique. Par A. J. B. PARENT-DUCHATELET, Membre de Conseil de Salubrité, &c. Deux Tomes. Paris, 1836. Baillière.

THE name of Parent-Duchatelet will long be remembered in connexion with the extraordinary work which we lately noticed—his Statistical and Physiological Account of Prostitution in the City of Paris; but the volumes now published are, perhaps, not less extraordinary, from the variety and extent of their subjects: they form altogether the richest mine of information, on every thing relating to the public health, that has ever been offered to the professional world. There are not less than about thirty papers here, which have, for the most part, been drawn up at the request of the French government: they are the result of indefatigable labour bestowed on matters of research, many of which would deter most inquirers, not by their

difficulty alone, but by the disgust which they could not fail to excite; for instance, the elaborate *Essai sur les Cloaques ou Egouts de la Ville de Paris*, and the *Rapport sur le Curage et l'Assainissement des Egouts, &c.* But on the other hand, how many of the subjects are there not as attractive as they are important? We may cite, for example, the articles, on the Methods of respiring deleterious Gases with impunity; on Artesian Wells; on the Purification of Dissecting-rooms; on Inhumations and Exhumations; on Knackeries and the methods in use for drying dead horses; on feeding pigs with horseflesh; and several essays on the influence of certain trades on the health of the workmen.

To do justice to the contents of these volumes would require more ample space for analysis than we could well afford; some, however, of the topics we have touched on before, in certain notices of the *Annales d'Hygiène;* and it may be possible, certainly it would be desirable, to take up some of the others on future occasions.

Most, if not all, the essays and reports in this collection, have been gathered from the periodical just mentioned. But the reader will readily appreciate the amount of his obligation to the spirited publishers, who have so liberally collected into a moderate compass, and rendered procurable at a very reasonable expense, what has hitherto been diffused through numerous volumes, accessible, in general, only in our larger libraries.

MEDICAL GAZETTE.

Saturday, November 26, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

HOMŒOPATHY;

FURTHER ILLUSTRATIONS OF ITS NATURE.

OUR last specimen of Homœopathy was confined to the effects produced by that potent drug *charcoal*—a drug which, though taken only in the millionth of a grain, excites so very extraordinary an influence over both body and soul. Let us now notice some other articles of the Hahnemannian materia medica; and lest it should be said that we select only those of inferior note, keeping the grand remedial agents in the back ground, we shall take *gold* and *silver* to begin with. Gold, be it known to the uninitiated, is prized by Hahnemann as a sort of *summum bonum*,—in which there are many ancient and modern authorities to coincide with him; it is a sort of *elixir vitæ*, with such powerful virtues as no other substance possesses: in fact, as Geber and the philosophers of alchemy maintained, gold is the delight and the staff of life—*materia lætificans et in juventute corpus conservans.* Hahnemann admits this.

But before we enter on the virtues of the substances just named, let us premise a few words on the nature of our argument. Our account of the homœopathic symptoms is, on this occasion as on the last, wholly derived from Hahnemann's own books, We quote his *Pure* Materia Medica, (so called, we presume, from its astounding *impurity*, —" Lucus à non,") from the authorized version of Jourdan—himself a worthy homœopath. We give the number of each symptom, in order that, if we misrepresent (as we surely have no desire to do), we may be censured and exposed. It will not do for the silly supporters of homœopathy to say, in general terms, that we mis-state, or that we do not understand Hahnemann. If we mis-state, let us be corrected; if we do not understand, then is Hahnemann not to be understood: he mystifies; he does not speak in intelligible language. We take up his books, presuming that they are addressed to persons of ordinary common sense; and we put upon the words employed the only interpretation of which they admit. But enough: now for the precious metals.

Perhaps we may as well begin with

Silver; not only as it comes first in order, but as the display of the virtues of this milder metal (however in itself most potent) may prepare us for, and prevent us from being dazzled with, the greater glories of gold.

The symptoms which follow, we should observe, are not produced by any vulgar salt of silver—such as the nitrate, which is sometimes used by allopaths — but pure virgin metallic silver: and, spite of all that may be said as to metallic silver not being soluble in the stomach, Hahnemann says he cares not: he throws himself on his *experience;* takes his dose, not containing the ten-thousandth part of a grain, and feels, among other effects, the following:—

14. Great itching in the corners of the eyes.

15. Great itching of the outer ear, obliging him to scratch till the blood comes.

48. Insupportable itching of the head and other parts of the body, as if from the creeping of some kind of vermin.

This reminds us of the symptoms of a millionth of a grain of charcoal: but it would seem that most of the homœopathic remedies make certain parts itch. Here is something more original;

46. Walking abroad causes fatigue and general heat, without sweating, but with uneasiness, as if one's clothes were too tight for him.

50. Dreams about things that happened during the day.

27. During the night, a rumbling in the belly, and *emission de vents.*

31. Almost every night—*une perte de semence.*

34. A cough in the morning.

The last of the symptoms experienced by Hahnemann from metallic silver, is—

66. Ill humour!

But it is satisfactory to know that a little more of the metal would cure this unpleasantness; or better still, if *gold* were taken.

Gold, which we must next notice, is a sovereign remedy with the homœopaths. It is said to have an extraordinary power of curing "melancholy attended with a propensity to suicide." The allopaths do not deny it this property when given in a tolerable dose; but the homœopaths say that the quadrillionth of a grain! is sufficient: to this the vulgar medical world demurs.

But to hasten to the symptoms produced by metallic gold: and the *symptoms*, be it recollected, are everything with the homœopaths; they are the disease itself. It is necessary to premise that the symptoms about to be enumerated are said to have been produced by a very small part of a grain of a dilution of gold to the quadrillionth. "Je n'emploie" says Hahnemann, "plus qu'une très petite partie d'un grain de la dilution au quadrillionième!"

We are now to consider the great founder of modern medicine as having swallowed this most potent dose: observe the effects, for they were experienced by *himself.*

75. Pain in the groin, as if a gland had become swollen there.

76. An *inguinal hernia* makes its appearance, attended with great pain, like cramp: flatus seems to penetrate into the hernia.

What thinks the reader of this effect of the quadrillionth of a grain of metallic gold?—inguinal hernia!—but let it pass.

81. Prodigious evacuation of the bowels in the evening (at the end of ten hours).

82. Diarrhœa in the night, with much heat of the rectum.

83. Fæces very abundant (très-volumineuses) with difficulty of passing them in consequence.

85. More urine discharged than the quantity of drink taken.

Then follow a set of symptoms which we cannot possibly venture to translate: they must speak for themselves.

86. Le matin, apres s'être levé, violentes érections et desir de coït.

87. Très-grande exaltation de l'appetit vénérien, qui auparavant avait été pendant long temps assoupi.

88. Erections nocturnes, plusieurs nuits de suite.

89. Ejaculation, trois nuits de suite, qui n'est pas suivie de faiblesse.

90. *Vulsion très-douloureuse dans la verge d'avant en arrière*, &c. &c.

Such are some of the beastly phenomena expressly attributed to a quadrillionth of a grain of metal. Is the reader awake, and still dubious of the gross humbug—of the fraud, attempted to be practised by these impudent impostors?

Leaving, them, however, in their beastliness, let us see some other effects which they pretend to trace to their invisible dose of leaf-gold.

98. During expiration a grumbling in the upper part of the chest, which descends even into the lower belly and the groin, followed by very rapid palpitations, lassitude, and anxiety; then a sensation of sinking.

Wonderful, truly, is the operation of this great agent; for we believe there never was such a *symptom* as this heard of since the world began!

But here are other effects of the invisible golden dose:—

133. Alarming dreams.

134. Frightful dreams of robbers, with cries in the sleep.

135. *Dreams of dead men!*

136. Awake in the midst of dreams.

139. *Toutes les nuits, rêves et erections.*

155. Melancholy—depression.

We forbear to quote the no less extraordinary symptoms described by other homœopaths, all of which are carefully treasured up by Hahnemann, and given to the world appended to his own. The reader is now sufficiently aware, from the express experience of the founder, of the great importance of gold, a substance which he and many other allopaths, who have hitherto been looked to as high authorities, always considered as a wholly inert substance—a substance on which the stomach and its juices had no power of acting.

We must certainly henceforth be on our guard how we introduce gold into our mouths: we are warned of the danger of fastening our teeth with wire of gold, or stuffing them with leaf. The consequences of swallowing even the sextillionth of a grain might be the death of us, or make us wretched for life. It would cause inguinal hernia, or purge us to desperation; in the evening excite certain parts of the system more violently than if we had taken cantharides; make our nights miserable with dreams of robbers and dead men; and our days deplorable with a feeling of suicidal melancholy. All from the accidental deglutition of an invisible quantity of metallic gold!

A word or two on another substance, which the world has hitherto thought it might trifle with, and swallow largely with impunity. Capsicum! Beware, ye eaters of *devilled* delicacies, ye lovers of curry, and even ye who meddle with pickles! Hear what dire effects have been produced by "a very small part of the millionth of a grain."

103. *Umbilical hernia*, with violence and pain.

111. The anus itches (after three, four, eight hours).

112. Lancinating, smarting pain in the anus, during a diarrhœal discharge.

155. Discharge of blood through the anus, during four days!

135. *Erection, le matin, dans le lit, sans pensées voluptueuses.*

136. *Violente erection, le matin, en se levant, qui ne peut être apaisée que par l'eau froide.*

137. *Pendant des badinages amoureux, tremblement affreux partout le corps!*

Have we given enough of these elegant extracts? For the present, at all events, we pause, and leave it to the Uwinses, the Everests, and the other neophytes, to explain, or to sit in silent admiration of, their great master. All

that we have said is justified by reference to Hahnemann's own book: we have given the *symptoms* as we have found them; and we defy the whole race of his pitiful hangers-on to prove that we have, in a single instance, garbled or misquoted him.

ROYAL COLLEGE OF SURGEONS.

We gave the substance of the following important notice a fortnight ago. The regulation, we understand, applies only to the recognized teacher, and does not extend to those employed as demonstrators,—the latter not usually coming within the cognizance of the College:—

The Council of the College, at an extraordinary meeting, on the 1st instant, established the following Ordinance, relating to the recognition of the certificates of teachers of anatomy and surgery in England and Wales:—

That in future no person be recognized by this College as a teacher of anatomy, physiology, and pathology, or in surgery, in England and Wales, until he shall have undergone an examination before the Council of the College on two separate days. The first examination to be in anatomy and physiology; the second in pathology, and on the principles and practice of surgery.

That no fee be demanded for these examinations; and that the recognition of the College be conveyed in the usual form of a letter from the Secretary.

By order,
Edmund Belfour, *Sec.*

November 18, 1836.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, Nov. 22, 1836.

Mr. Earle, President, in the Chair.

At the meeting held this evening, a paper, communicated by Mr. Stanley, was read: it was entitled—

"*On some of the Forms of Atrophy of Bone.* By Thomas Blizard Curling, Assistant-Surgeon to the London Hospital, and Lecturer on Morbid Anatomy."

The author of the paper employs the term atrophy to express all those changes evinced by loss of substance, unaccompanied with any alteration in texture or organization, and without any reference whatever to the morbid action which produces it; and several forms of atrophy of bone, which are but imperfectly understood, or which have not hitherto been noticed by pathologists, are the objects of his inquiry. He first alludes to local atrophy, in which the earthy and animal constituents are removed equally and together; and he instances as an uncommon variety, and as being of considerable interest in surgical pathology, a case of partial dislocation of the os humeri forwards, with atrophy of the head of the bone and inner edge of the glenoid cavity of the scapula.

Instances are mentioned in which the particles entering into the composition of bone, both hard and soft, are universally decreased, and the bone thus rendered smaller and lighter, which, in order to denote the direction of the wasting, and to distinguish it from another form, the author proposes to term *concentric* atrophy of bone.

Some cases of this form, arising from loss of function and deprivation of nervous influence, are alluded to.

Mr. Curling next proceeds to notice the effects of a diminution in the normal supply of blood. After some observations, the purport of which is to show that, in consequence of a collateral circulation being readily established, atrophy from this cause only takes place in organs supplied by one or two large arteries, as the kidney, and that the operation of tying the vessels to arrest the growth of tumors, is only applicable to such growths as are supplied by a few large arteries, immediately as they enter the diseased structures, he proceeds to inquire whether the bones may not, in consequence of accident or disease, sometimes have their circulation interrupted at the point where the vessels are about to enter their structure. It occurred to him that, in fracture of the long bones, one part must have the supply which it derives from the nutritious artery entirely cut off; and although there is a free communication with the periosteal vessels, yet the minute canals through which they pass being of a dense unyielding nature, these vessels must be prevented from undergoing that rapid increase in size, which, in the soft structure, constitutes so efficient a provision for a due circulation. Numerous sections of fractured cylindrical bones were accordingly examined, in order to ascertain if the ends which were deprived of their supply of blood from the nutritious artery suffered a corresponding degree of atrophy: this was found to be the case. Thus in femurs fractured below

the entrance of the nutritious artery, the interior cavity of the inferior extremity was enlarged, the cancelli expanded, and the walls thinned, a form of atrophy which the author proposes to distinguish by the term *eccentric*. A similar alteration was also observed in fractured tibiæ, while, in a humerus broken above the entrance of the nutritious artery, the upper portion was the seat of this change.

Mr. Curling further observes, that the division of a bone, with its circulation diminished, and actually wasting in consequence, must be in a condition most unfavourable to unite, shewing the necessity for the provisional callus described by Dupuytren, for the security of the limb until the circulation in the bone is re-established. This species of eccentric atrophy is not constantly met with, being absent under the following circumstances:—

1. In bones recently fractured; because the process by which atrophy is accomplished must necessarily be gradual. 2. In bones long united; because a collateral circulation is subsequently established, and the previously existing lesion repaired. 3. In bones fractured during the period of growth; because the circulation being at this time more active, and the vessels and canals through which they pass larger, the circulation is re-established before any visible degree of atrophy can occur. Occasional variations both in the number, size, and situation, of the nutritious arteries, are also mentioned, as tending to prevent this change from being constant. Upwards of twenty preparations, in different museums of the metropolis, are distinctly referred to in proof of the justness of the author's views.

After briefly noticing the pathological investigations of Sir Astley Cooper, in regard to the neck of the thigh-bone, allusion is made to the state of the head of the femur after fracture within the capsule, where, when the periosteum investing the neck is torn through, the circulation is diminished to a greater extent than in other descriptions of fracture, so that the whole of the detached bone suffers, and the atrophy, instead of being only eccentric, occurs throughout its texture, the bones becoming insufficient to fill the acetabulum.

The author treats next of the atrophy of old age, which he likewise describes as eccentric, and generally commencing first in the neck of the femur. He mentions that the animal tissue is usually removed first, so that the bone is rendered brittle, but that in some instances the earthy parts are removed before the animal tissues; which accounts for the head of the femur sinking down upon its shaft. He remarks that a similar change sometimes takes place in the head of the humerus, and notices a preparation in the collection of the London Hospital, where the head of this bone is depressed, and its shape altered, from the eccentric atrophy of old age, attended with softening.

The remainder of the paper is occupied with an inquiry into the nature of the disease called *mollities ossium*. The case of a female who died of this affection in the London Hospital is related, and the pathological condition of the bones minutely described. A table is given of 16 cases, showing the sex, age, and authority for each; and from a review of the facts thus collected the author is induced to conclude, that the disease commonly occurs in females who have borne a family: that it usually proves fatal from the age of 30 to 40: that it never appears before the age of puberty, and very rarely after the age of 50: that in general the internal organs are healthy, and the various functions duly performed, unless interfered with by the distortion: that its progress varies greatly, lasting sometimes for only a few months, in other instances occupying many years; and that it is nearly always accompanied with pains of a severe character.

Mr. Curling considers this disease as a species of the eccentric atrophy of bone, commencing invariably from the interior in the flat bones, affecting first the *diploe* and subsequently the external tables: in the long bones attacking first the interior of the shaft, and afterwards extending to the vascular or cancellous extremities, and going on until, if the patient survives, no part of the osseous tissue remains, its place being supplied by an increased secretion of the medulla, invested and retained in *situ* by the periosteum. He attributes the circumstance of the disease being attended in some instances with the utmost distortion without fracture, and in others being expressed by a remarkable fragility of the bones, to a slight modification in the wasting process,—to the more or less rapid decay of the earthy parts as compared with that of the animal constituents. Taking into account the fact that it usually commences in the inferior extremities, and goes on most rapidly in the harder parts, the author is led to regard the disease as the result of defective nutrition, and not of increased activity in absorption. In support of this opinion he points out the analogy which exists between this disease and the atrophy of old age. In both, the atrophy is eccentric, attended with an increased secretion of medulla, and more remarkable in females. In both it is subject to slight modifications, in the ratio of the decay of the earthy and animal constituents, and cases of *mollities ossium* are alluded to, in which, like the

eccentric atrophy of old age, it commenced first in the neck of the femur. Instances are given in which sediment in the urine and calculi had passed, and in which the perspirations were fœtid and turbid. These circumstances are regarded as tending to indicate that the blood was loaded with something which it endeavoured to discharge by any of the natural outlets: that there is no want of the phosphates in the system generally, and when taken in connexion with all the facts hitherto ascertained—the age at which it occurs—its being independent of disease elsewhere, its commencing in the lower extremities, &c., to shew that the parts essentially at fault are the vessels that nourish the bone, the impaired function of which is first manifested in the system of the nutritious artery.

In conclusion, the author takes occasion to observe that the remarkable fragility of the bones noticed in connexion with cancer, is sometimes owing to this eccentric form of atrophy.

CLINICAL LECTURE,

Delivered at St. George's Hospital, November 11, 1836,

By Dr. Seymour.

Gentlemen,—The cases of rheumatism of which I spoke to you some time back, are all well.

POISONING BY ARSENIC.

The case which I mentioned at our last meeting — that of a woman respecting whom I felt some anxiety, under the idea that she had taken arsenic—has quite recovered. I am now inclined to believe that she never took arsenic at all; or (for she stated that she swallowed it in gin) that it fell to the bottom of the glass, and she drank but little of it; or that it was removed by the stomach-pump at the station-house, before she was admitted into the hospital. At all events no symptoms have occurred since, and she is perfectly convalescent.

GONORRHŒAL RHEUMATISM.

The other case about which I spoke at our last meeting—that of Dodson, who laboured under gonorrhœal rheumatism of thirteen years' duration—is, I am happy to say, something better. The use of the vapour-bath, and the moderate exhibition of the inspissated juice of colchicum, certainly appear to have been attended with benefit. He is able to move the left hand more easily than at his admission; a blister has been applied to the right wrist, and he begins to be capable of moving the fingers of that hand also. This, it is true, is but very limited relief in such a case, but, inasmuch as it has occurred within the last ten days, I have every reason to hope, that by pursuing the same plan of general treatment, and applying a blister to the affected joints of the hands and feet in succession, we may yet restore a modified degree of movement, and relieve him from the condition he is in at present—that of being a perfect cripple.

DIFFUSE RHEUMATISM, CONJOINED WITH LARYNGITIS.

I may also state that another severe case of rheumatism was admitted in the course of the week, previous to my taking in on Wednesday; and I would finish with that subject before I proceed to the next. It occurred in a man named Allen, in King's Ward, who had been a patient in the house, under the care of the surgeons, for a fracture of the collar-bone. He had got well, and went out during the dreadful weather a few days ago. He was again admitted into the hospital on the 3d November, and came under my care, with acute rheumatism. As the bandages applied for the fracture still remained, I had them taken off, and he was examined, that we might see whether any part of the complaint arose from the injury he had sustained. That was found to be perfectly well, but the rheumatism was of the most severe kind, and the same cause which produced it—viz. the alteration of temperature—also gave rise to some degree of inflammation of the wind-pipe. He laboured under a hoarse, harsh cough, accompanied with a loss of voice, and considerable difficulty of breathing. The rheumatism is the most severe that it has been my lot to witness for several years: it is of a diffuse kind, and affects the arms, the hands, the feet, and the knees. He is totally unable to move, and, added to this, there is the more severe inflammation of the wind pipe.

Treatment.—I was obliged to adopt active measures. He was ordered to be bled, and three grains of calomel, with one of opium, were exhibited every four hours. On the following day, the blood which was drawn was found to be both buffed and cupped: I never saw blood so much inflamed even in inflammation of a serous membrane. Estimating the clot according to a line drawn perpendicularly to the horizon, I should say that one-third consisted of buffy coat. The blood being in this condition, further depletion was ordered on the following day. I think I mentioned that is an unusual circumstance

to be obliged to bleed frequently in acute rheumatism *, but this patient was bled three times, and on each occasion the blood presented this very remarkable appearance. The other symptoms which marked the severity of the disease became diminished. He was sometimes covered (which is frequently the case in severe rheumatism) with acid sweats. You might ascertain the acid by the fœtor, which was very unpleasant; but, in addition to this, litmus paper, when placed on the perspiring surface of the body, became as much changed as if it had been infused in a vegetable acid. The urine was abundant, and dark coloured, and there were present lithic acid and the lithates. This likewise shewed very great acidity, upon litmus paper being put into it, Some of you saw that to-day. The saliva even in this man is acid.

Now as all these secretions are taken from the blood, one would think that it was an admirable illustration of the humoral pathology; but the last trait, at least so far as the ordinary chemical signs are concerned, is wanting — viz. that the blood drawn does not show a trace of acid on the application of litmus paper. Therefore we must suppose that there must be some alteration from the blood by the secreting vessels, during the period the acid is formed, rather than imagine that it exists free in the blood, and is drawn off in that state by the secreting process, so as to mix it with the different fluids to which I have alluded.

The principal relief afforded by the treatment laid down, has been the diminution of this acid. To-day the perspiration scarcely reddens litmus paper; the acid contained in the urine is greatly diminished; the urine has become clear, and there is no admixture apparently of any of the lithates which were in such abundance when the patient was first admitted. He has had a blister applied to the chest, and the cough has become greatly diminished; his mouth is not sore. He is a great deal better to-day, and there is a fair promise of his recovery.

I mentioned in my first lecture, that in treating acute rheumatism, I resort, in the first instance, to venesection, and subsequently to the exhibition of guaiacum; and you will naturally ask why I differed from my ordinary plan in the present instance. First of all, I know nothing which exercises so great a control over the acid sweats as opium; in the next place, there was some degree of inflammation of the wind-pipe—a far more dangerous disease than rheumatism, and which might have proved fatal in a short time; and, in the last place, the blood was covered with the buffy coat I have described. Under these circumstances, I thought it better to trust to calomel and opium than to rely on those measures which I laid down before, and which are attended with such rapid success. There is a case in the house of diffuse rheumatism of the ordinary kind, in which the patient has been put on guaiacum; and though she was only admitted last Wednesday, yet she is so much better to-day that I have no doubt she will be well in a couple of days. The case before us is of a more complicated description, and therefore I put the patient on a mode of treatment more decidedly antiphlogistic, and calculated at the same time to allay irritation. Why opium should so act I cannot tell, but it certainly does moderate the secretion of acid.

* Vide Medical Gazette, No. 461, p. 119.

GOUT.

I proceed now to consider three other cases, which it is curious to find in a hospital—viz. cases of gout. It is very uncommon, in a metropolitan hospital, for one physician to have three cases of gout under his care at the same time; I do not recollect such an instance before. If the rich have their comforts and immunity from hardship, they have, in the shape of gout, something to make up the equilibrium. This disease is almost exclusively confined to the rich—so much so, that in private life a man sees ten times as many cases as a physician to a hospital. We have, however, three cases, and they are in different stages or periods of the disease.

REGULAR GOUT.

The first of these cases occurs in a man named Robert Mascall, 47 years of age. Two years ago he was under my care for a similar disease, since which he has never had a return till now. He labours under one of the most severe forms of the complaint. The gout is principally observed in the joints of the great toes of each foot, and the fourth finger of each hand; but all the other joints are more or less red and swollen, and there is fluctuation in several of them. The pain is intense, and the pulse 126, and compressible—that is, weak. If there had been a strong pulse, I should have thought bleeding necessary; but I ought to mention that it is not good practice to bleed in gout, except under very particular circumstances.

I have said that all the joints of the fingers and toes are red and swollen. How, then, do you distinguish gout from rheumatism? There is a constitutional affection which accompanies gout which does not generally attend rheumatism, though

sometimes, in the aggravated forms of these diseases, they meet on a confine so exceedingly narrow that it is difficult to separate one disease from the other. It is generally taught in the schools, that gout attacks the smaller rather than the larger articulations; and that it is preceded by constitutional symptoms. This man suffered from derangement of the intestinal canal and the digestive organs. There is generally great distress, loss of appetite, thirst, flatulence, and very low spirits, so that the patient, to use a common expression, is "fit to hang himself," before a paroxysm of the gout comes on. This is not the case in rheumatism; it more immediately follows, in constitutions prone to it, from some exposure to cold. In the case before us these symptoms were present; the disease was preceded by considerable irritation of the stomach and bowels, great vomiting, flatulence, and diarrhœa. Upon the subsidence of these symptoms, the gout appeared in its present aggravated form.

Treatment. — He was ordered to take three grains of calomel, half a grain of opium, and four grains of James's powder, immediately, and to be purged on the following morning with an infusion of senna—half a drachm of vinum colchici, half a scruple of magnesia, and a drachm of tinct. senna; this is a very good purgative medicine for relieving the bowels. Magnesia is an anti-acid, and senna is purging, but why was the colchicum added? This remedy, which is so much cried up in our own time, is as old as the time of Alexander Trallianus, and it appears to exercise almost a magical effect over the disease. It seems that it owes its property to the presence of veratria; and all those roots containing veratria are proved to have a greater or less influence in the cure of the disease. The wine of the root of veratrum, of the root of colchicum, and of the Gratiola officinalis, all contain veratria, and are more or less celebrated for the treatment of gout. This medicine was used by the ancients under the name of *hermodactyls*. Alexander tells us in a few short lines all that we know about it at present:—"The medicine given to a patient labouring under gout causes him almost immediately to walk; but he is more subject to a return of the complaint, at shorter intervals, than before he took the remedy." It was formerly believed that it must purge the patient; that if it did not produce this effect it was of no use; but, given in a larger quantity, it produces a violent degree of hypercatharsis. However, if it be properly managed, no harm appears to arise from it. I have used it in the hospital in rheumatic affections of the joints for many years, and I never saw an accident with it, or had any reason to suppose that any arose from its exhibition.

The bowels having been acted on by the medicine three times, the fingers being still tense, the urine less high-coloured, the sputa bilious, and the countenance less sallow, resembling the countenance of a person whose digestive organs are much deranged, he was then ordered half a drachm of the wine of the root of colchicum, half a drachm of calcined magnesia, and an ounce and a half of peppermint water, three times in the day; and at night three grains of the acetic extract of colchicum, and five grains of Dover's powders. The object in giving the colchicum here was from its reputation in the treatment of the disease: indeed, it was so great, that by Avicenna it was termed *theriaca articulorum*. A sufficient quantity was given here to make an impression on the disease, and I should say a larger quantity than it is right to begin with in private practice, because persons who live a more confined life than the lower classes, who are much exposed to the elements, will sometimes be greatly affected by such a dose. You should not begin with a larger quantity than a scruple of the wine.

On the 3d of November the heat of the parts was greatly reduced, and he was very much better; but the colchicum was acting violently on the bowels, he was under its influence, and the pulse was a little irregular. He was ordered to take a grain of opium immediately; it was to be repeated at night, and he was to take a rhubarb draught on the following morning. On the 10th the disease was greatly diminished, and the bowels were still open from the colchicum. To-day he can shut his hands; the inflammation is nearly reduced; the joints are still swollen, but he expressed himself as very comfortable. It is impossible to conceive any thing more remarkable than the rapid relief afforded by a single remedy in a disease of such severity as the present case of gout.

General history. — Before proceeding to the next case I will speak of the general history of the disease. The gout, when it occurs in the regular form, generally affects the joints of the great toes, or of the fingers, or of the ankles; it seldom begins in the large joints, and most frequently in the great toe. It is usually preceded by the symptoms which I mentioned, of dyspepsia, heartburn, flatulence, sickness, great indisposition to take food, and great depression of spirits. When a man who has lived what is called *hard*, or, by way of glossing it over, *gaily*, arrives at about the

middle period of life, he is attacked during the night — these symptoms having preceded—by a most violent pain in the joint of the great toe; a pain so severe, that those who have suffered it say there is none equal to it in any other disease. The pain goes on increasing till towards the morning, and sometimes it lasts the whole of the following day; and towards the second morning begins to remit, gets better, the patient falls asleep, and has a little respite. The following night the pain begins again; it is lost in the morning; and so it proceeds for several days. Sometimes in the course of the night it changes from the right foot to the left, or *vice versâ*, and so it goes on till the fit is over, which generally lasts, in the severe form, several weeks. At first the paroxysms are generally slight; after a time they become more severe; and as the man advances in life they are very severe indeed, lasting much longer each time; or there is a succession of small fits, recurring at very short intervals.

What I have now described is a regular fit of the gout; but there are two or three varieties which are more serious. The gout, like rheumatism, shifts about: it will leave the foot and attack the hand; it will leave one hand and attack the other; it will attack both hands, and leave them and attack both feet, and that in a very short space of time. This is termed *erratic gout*. Sometimes it will leave an extremity suddenly, and attack an internal part; and this is called *retrocedent gout*. This is a dangerous form of the disease, because it sometimes attacks a vital organ. It not unfrequently happens that where it leaves a part at a distance, the stomach, the heart, or the brain, become affected; or the bowels may be attacked, and there is violent diarrhœa, dysentery, and great pain. The symptoms are sometimes so acute, that they threaten to terminate life. Effusion sometimes takes place into the brain, and in a short period of time lymph is deposited upon the surface. Sometimes it attacks the viscera of the chest; and inflammation of the lungs may take place upon the cessation of gout in an extremity.

RETROCEDENT GOUT.

We have an instance in the hospital of the recession of gout, which is very curious. It occurs in a patient in King's Ward, who was admitted under my care about a month ago, with some degree of inflammatory action in the right lung, and a swelling of the legs. He was put under the influence of hydropical medicines—the pilula hydrargyri, squills and digitalis, and a nitre draught. He speedily got well, and was to go out on the Wednesday, when he was attacked suddenly with gout in the hand, affecting the joint of the fore-finger. He appears to have been very subject to the disease, and it appears also, on inquiry, that he has been a person who has lived exceedingly well—better than his circumstances woul dadmit; and he has probably brought himself to his present unfortunate condition by this very means. We asked him what the pain in the joint was like, and he replied, "like the toothache"—a good description of the violent pain which is felt in these cases. His bowels were opened with calomel, followed by senna and vinum colchici, and then he was ordered half a drachm of the wine of the root of colchicum, and half a scruple of magnesia, in camphor mixture; and he took three grains of the acetic extract of colchicum, with five grains of Dover's powders, at bedtime. The urine in this case was scanty and high-coloured, the pulse not above a hundred, not very strong, and occasionally intermittent. This medicine was ordered on the 4th; on the 8th the gout had nearly disappeared: when we saw him yesterday it was entirely gone, but in its place he was attacked with a violent inflammatory affection of the throat, so that he was scarcely able to swallow. On looking into the throat it was of a bright scarlet colour, very much like florid erysipelas; and there was some swelling of the right tonsil, attended with a greater degree of pain, and a more increased secretion from the membrane, than usually takes place in cynanche tonsillaris. Here is an instance of the transference of gout. In private life I have heard of a case which was exactly the reverse of this. A physician of considerable eminence was attacked some three or four years ago, after exposure to a draught of cold air, with what appeared to be cynanche tonsillaris. It was so severe that it prevented him from swallowing for several days, and he began to fear that he should be starved to death—precisely like our friend up stairs, who expressed himself alarmed on that account. He continued in great agony for several days, when the affection suddenly disappeared, and he called for some tea and toast, which he took with great relish; and within a short space of time, I think within an hour, the gout appeared in the foot. Here was an instance where the gout first attacked the throat, and then the foot; exactly the converse of the case under consideration.

Treatment. — The great object in this case is to diminish the inflammatory action going on in the throat, and to bring the gout back to the extremity. Three

grains of calomel, and half a grain of powdered opium, were put on his tongue every six hours. He was ordered a mustard poultice to surround the throat, which is sometimes effectual in relieving the attack; his feet were put into hot water, and to-day he is a good deal better. He sleeps more easily, the throat is less inflamed, there is less secretion; but the mustard cataplasm has not had the effect desired, and I have ordered a blister behind each ear. The mouth is not sore. It is possible that, by treating the disease of the throat itself as an inflammatory disease, we may get rid of the whole attack, or in the course of another day and a night the gout will probably appear in the foot, to the great relief of the inflammation at a distance. Here, then, I can shew you, what is not often seen in a hospital, a case of retrocedent gout.

ATONIC GOUT.

There is yet a third case of this disease in the house, occurring in a man of the name of Henry Elliott, in Fuller's Ward, who has been subject to slight and frequent attacks of gout for many years. At present he has slight pains in the knee, with much sensation of weakness; the pulse 100 and weak; tongue clean; the attack preceded by loss of appetite and lowness of spirits.

This is not like the other cases; there is no inflammation present; and it more resembles what is termed *atonic* gout. Where a person has been subject to fits of the gout, and it is not manifest upon the extremities, it not unfrequently happens that the constitution appears to suffer very materially. Without any obvious reason the patient declines in health and strength, the limbs become weak, the digestive powers are impaired; and this is termed *atonic* gout.

Treatment.—The best way of treating this complaint is, to endeavour to remedy the condition of the digestive organs, and let the gout alone; let the patient gain strength, and recover from the weakness of the limbs.

A great many remedies have been prescribed for keeping off the gout. A great many persons in private life, if their bowels are confined, take every morning 3 or 4 grains of rhubarb, and double the quantity of magnesia, and they will continue this for weeks together. By regulating the digestive organs, getting rid of the acid secretion when it is formed, and inducing a habit which prevents its formation, many persons keep off the gout. Where the bowels are affected with looseness, as sometimes happens, it is better to take the same quantity of rhubarb, with double the quantity of carbonate of soda. The latter remedy, not for the cure, but for the keeping off of gout, has been much recommended; and there was an idea that it would prevent it to all eternity. Persons used to be seen at dinner, if you watched them closely, screwing out little bits of paper containing 5 or 10 grains of carbonate of soda, which they emptied into a glass of white wine, believing it would act as a prophylactic. I believe that it is a good mode of correcting acidity in the digestive organs, but I do not hear that gout is less frequently met with than before. Unless at the time of taking the soda the dinner could be dispensed with, I doubt whether the gout could be prevented by it; and I think that persons might dispense with the soda, if they would at the same time dispense with the dinner.

I ordered for this patient 6 grains of rhubarb, half a scruple of carbonate of soda, 2 grains of P. Cinnamom, and 3 grains of Pulv. Rad. Calumbæ, to be taken in a glass of water every morning. I believe that, with a well-regulated diet, this remedy has power to cure these trifling cases of gout.

What are we to say, suppose the gout leaves one extremity and attacks a vital part—the lungs or the brain? Humoral pathologists, having an idea that gout must appear on the extremities, and that if it did not, the patient was likely to die, were of opinion that purging or bleeding, to disturb the concoction of morbific matter, was bad. What was the consequence? There is a general expression that bleeding in a gouty constitution is contra-indicated. Had it been any other disease than gout, I should have taken blood the other day, but I knew that the patient would be relieved by other remedies which have the effect of relieving gout itself. Nevertheless, one of the most staunch supporters for not interfering with the humours—Sydenham—says that there can be no doubt that if the disease recede from an extremity, and attack a vital part, it is to be treated like all other inflammations. He illustrates this position by referring to the lungs, and says that the complaint will sometimes leave an extremity, and attack the lungs, in which case it is to be treated as a true peripneumonia. He applies the same reasoning to the head. I think that I should be treating you very ill if I were to leave an impression on your minds, that in the case of the transference of gout to the brain or lungs, you were not to bleed, seeking at the same time, as much as possible, to bring back the gout to the feet, by the application to them of a mustard cataplasm, or friction, or warm remedies of that description.

Persons who recover should always have recourse to bitter medicines, and one of the most famous was Portland powder, a combination of bitters mentioned as far back as the time of Cæleus Aurelianus. So do we move in this kind of cycle; there is constantly coming to the top of the wheel what was at the bottom; and we employ what our predecessors used before us, and with the same benefit. Portland powder was given in great abundance to persons who suffered from the gout, with a view of correcting the digestive organs. The powder which I gave to Elliott was upon the same principle.

I have mentioned the phenomena of the fit; you have seen the manner in which it is to be treated, the danger which arises from retrocession, and how that is to be remedied.

We will now speak of some of the alleviating circumstances. The first man had a tepid spirituous lotion applied to his hands. You must be careful how you apply cold to the hands: the application of cold water has been recommended by some authors who differ from the rest of the world. A spirituous tepid lotion, however, will sometimes relieve the pain immediately; and where it can be borne without pain, it should never be omitted. Dr. Scudamore has written an excellent work on gout, which you may read; and he lays great stress on the comfort to be derived from the use of a spirituous lotion. In the present case heat was abstracted, and there was a great relief of the painful affection. By the use of these remedies you will sometimes have no gout appear, but there will be gout at a distance—gout in the muscles of the back; and this will be relieved by taking three grains of the acetic extract of colchicum, with five grains of Dover's powders, not during the day, but at night.

There has been a great dispute in the profession, as to whether we should use the wine from the seeds or from the root. I always employ the latter, because it is the most effectual; and I am told that a preparation of wine from the seeds is of far less strength. However, if the wine from the root makes the patient sick, you may try the wine from the seeds. You must remember that this is a matter of experience, and not of theory, for it happens that one kind will agree, while another fails. Thus in the case of Dodson, who suffered from a severe affection of the joints, he was ordered three grains of the acetic extract of colchicum twice a day; it disagreed with his stomach, and produced vomiting, and was attended with all the bad consequences resulting from it. I ordered him the inspissated juice twice a day, in a quantity equal to three grains of the acetic extract, and he was able to bear it. I saw a case in private practice, in which I ordered a grain of the inspissated juice, with opium; it produced no effect on the disease, but disagreed with the stomach. I think I ordered three grains of the acetic extract, and the converse of what occurred up stairs took place; the acetic extract succeeded where the inspissated juice failed. The same thing will occur with all the various preparations of this medicine with which I am acquainted. You are not to suppose that because one sort fails, therefore colchicum disagrees with the constitution; on the contrary, if you vary it, it will perhaps be found exceedingly serviceable. There is an idea that colchicum is apt to prepare the patient for more frequent attacks of the gout. In hospital practice the disease is rarely to be seen, but in these gouty affections of the joints, the cure is as perfect as in any other complaint. I have seen the worst effusion taking place—every joint of the body full of the disease. I have kept the patient some time in the house, and there has been no tendency to a return of the disease. A great deal of blame which is heaped upon medicines which relieve the gout, and so immediately relieve it that nothing can approach to the advantage derived from them, is rather to be attributed to the conduct of the individual. The moment that there is a relief from the pain, the same course of life is pursued which led to the preceding attack; and it is probable that the recurrence of the affection is rather to be attributed to the life led, and especially when there is an idea of immunity from the disease, than to the fact of the complaint having a tendency to domicile in the system, or to any other theoretical idea.

ŒDEMATOUS GOUT.

There is another form of gout, but of which we have not a specimen in the hospital. It is termed *œdematous* gout—that is to say, the hand or the foot pits on pressure; there is little distinct pain, and the constitution is very languid. This form is dangerous where it is transferred. I have seen one or two cases in private practice, and it is very amenable to the usual doses of colchicum. I saw a gentleman who came from abroad, and who told me that whenever he was attacked with the disease, he cut a hole in his shoe, but his toe was not very painful unless he walked upon it. He did not feel it at other times. He had been in the habit of taking 20 drops of vinum colchici when the disease came on, and it always cured him in two or three days. At Paris, he got what he thought was a bad kind, because it disagreed with him. I recom-

mended the acetic extract, and it dispersed it in a day or two. You see the extraordinary power which this remedy has. There is no doubt that when the patient is well, it is a good plan to give one or two doses of calomel, and endeavour to improve the secretions of the liver. If the bowels are disordered, it is generally best to give 3 or 4 grains of blue-pill at night, and sulphate of magnesia in mint-water, in the morning. In this way you may entirely establish the patient's health. We live in a world where it is all very well to say that persons should live abstemiously, but it is impossible to induce your patients to do it; if you told them that they must, they would not obey you. The next best thing is to say what may be done. This will depend upon the habits of the individual. It has been considered that Spanish wine is the best for patients to take, because it contains the least acid. Claret and Moselle contain a great quantity of acid, and are very apt to bring on a fit of the gout. It is said that there is more gout in one parish in London, than in all Bourdeaux and Germany, where the wines are made. But the question is, what is best for the disease when established. Sherry-and-water is the best you can recommend; or two table-spoonsful of brandy in soda water, which is better still. Vegetables should not be allowed; still it does every now and then occur, that after persons have left off vegetables for a great length of time, and the gout has not diminished, that returning to well-boiled vegetables has been attended with advantage. Probably the benefit arises from the abstinence from meat; and if persons would abstain altogether, no doubt they might be cured. I recommend you to read Sydenham, who has some curious cases. He records an instance of one man who lived on milk, with which he took a slice of bread for a year, and he got rid of the complaint. He could not be persuaded to continue it longer. I know of a very curious private case. The patient had the good sense to abstain from good living altogether, and he entirely recovered, and got rid of the disposition to gout. When a person has once incurred the habit of hard living, it would appear that the constitution is brought into that state in which the food cannot be digested without a certain portion of stimuli, and in general animal food is to be preferred, and a warm wine in moderation, mixed with water, rather than acid wines or vegetables.

I have no farther remarks to offer at present on these cases, but I beg that you will watch them, for they are very interesting.

ST. BARTHOLOMEW'S HOSPITAL.

Stricture—Abscess in Perineum and Prostate Gland—Effusion of Urine—Death.

Edward Walker, aged 59, admitted into St. Bartholomew's Hospital, under the care of Mr. Earle, November 5, 1836. He states that he has suffered from stricture in the urethra for thirty years; that he has had difficulty in making water during the same period, and that this difficulty was greatly increased on last Thursday week (October 6th); in consequence of which he applied to a medical gentleman, who made an attempt to pass an instrument for him, but without success: it did not reach the bladder, and he bled very much after the operation.

On the evening of the same day, he suffered great pain in the perineum, and could only pass a small quantity of water. He did not seek medical advice from this time until Thursday, November 3d (a week), two days previous to his admission, when another unsuccessful attempt was made to introduce an instrument, after which only a very few drops of urine followed.

Saturday, Nov. 5th, 9 o'clock A.M.—He now states that he has not made water for a week. There is considerable fulness of the perineum, with great pain of that part, and some pain of the scrotum. His countenance is expressive of great anxiety. Tongue covered with a dark brown dry fur; pulse quick, and small. An attempt was made to introduce a silver catheter, which came away much blackened and discoloured, and about eight ounces of extremely fœtid urine followed the removal of the instrument. He was placed in a warm-bath; in which he remained about twenty minutes, and obtained great relief. Mr. Earle saw him about one o'clock in the afternoon, and, after unsuccessfully attempting to introduce a catheter, he cut down upon the urethra through the perineum, with a double-edged scalpel, laying open the canal immediately behind the bulb. Some of the same fœtid urine slowly escaped. On attempting to pass a catheter through the wound into the bladder; it passed evidently out of the canal of the urethra into a boggy undefined space, having bridles extending across it in all directions, and which gave the sensation of a cavity in which there was breaking down of cellular structure. With much difficulty, a gum-elastic catheter, without a stilette, was introduced into the bladder. This was retained in position by proper bandages. He takes a saline mixture with antimony.

7 P.M.—He expresses himself much relieved by the operation; healthy urine

passes freely through the catheter; he complains of no pain; tongue moister, but still much furred.

6th.—Has slept well (the first sleep he has had for some days past); urine passes freely, both through and at the sides of the catheter, but he complains now of great pain in the scrotum and left groin. Fomentations ordered to these parts. Tongue remains as yesterday, as does the pulse. Bowels are freely opened.

7th.—Has had rigors at intervals, though he has continually dozed since yesterday. The catheter is removed from the wound, as the urine flows freely past it; the pain in the scrotum and groin has much subsided, though the scrotum is greatly enlarged and livid. A large diffused swelling, with considerable redness of the integuments covering it, was observed in the left lumbar region, extending down to the brim of the pelvis. A puncture was made into this with a lancet, and some bloody urine escaped; and minute punctures were also made into the scrotum. He was ordered to discontinue the antimony, the action of which was transferred from the skin to the bowels. Wine and brandy were ordered to be administered frequently, and fomentations to be applied to the loins and scrotum.

8th.—Urine continues to escape through the wounds in the perineum and loins. He lies in a comatose state, and is rapidly sinking.

He died on Wednesday the 9th, having been quite insensible during the last twenty-four hours.

On examination after death, the urine was found to have completely infiltrated the cellular tissue of the perineum and scrotum, the left groin, and to have extended upwards to the loins, and even to the axilla, on that side; but no urine was effused into the cavity of the abdomen or pelvis. The bladder was much thickened, and the mucous membrane in an ulcerated state. The prostate gland was slightly enlarged, with an abscess in its substance. The urethra was very much diseased, the first four inches being the only part assuming at all a healthy appearance. There was great difficulty in following even the track of the remaining part, which appeared to have given way about the membranous or muscular portion. Opposite to this spot there existed an abscess in the perineum, communicating with the urethra, and also with that in the prostate gland. It was also evident that several false passages had existed, one of which, after pursuing a course of about two inches, perforated the urethra again. The kidneys were healthy, but the ureters much dilated.

It would have been exceedingly interesting to have discovered whether the urethra was ruptured primarily, in consequence of ulceration commencing within its canal, or whether this was secondary to the prostatic and perineal abscesses. From the condition of the patient when he entered the hospital, and state of the parts after death, the solution of this difficulty was rendered impossible.

THE NERVES AND MUSCLES OF THE EYE-BALL.

To the Editor of the Medical Gazette.

Sir,

In justice to Sir Charles Bell, I have to thank Mr. Shaw for shewing that I ought to have coupled the name of that anatomist with that of Bojanus, as having, amongst modern authors, alluded to the distribution of the sixth nerve to the suspensory muscle of the eye of the lower animals. Although I have perused "The Nervous System" of that author—I will not say "with the greatest attention," but certainly with as much as I am capable of—yet, upon the occasion of my attention being lately directed to this subject by the publication of the observations of Mr. Walker, not having Sir Charles's large work by me, I contented myself with referring to the original papers published in the Philosophical Transactions, knowing that nothing material was afterwards added to the papers on *this* subject. I now find, upon comparing the two works, that the passage alluded to by Mr. Shaw, which I had overlooked, is about the only one added to the papers as originally published. I do not fear being charged with any culpable neglect of the sources of information, in omitting to refer to the "Anatomy and Physiology of the Human Body," when desirous of studying the original observations and theories of the author, of which, in this work, he himself observes, that "the substance" only is "introduced in their proper places*."

I cannot but regret that, in his injudicious zeal to advocate the claims of Sir Charles Bell, Mr. Shaw should have allowed himself to pen a communication which is so evidently wanting in good feeling, and which contains such numerous perversions of the statements contained in my communication.

* Preface to the Anatomy and Physiology of the Human Body, by John and Charles Bell. 7th edition, p. 12.

Lest, however, this angry piece of criticism should mislead any of the readers of the MEDICAL GAZETTE, I will make a few remarks upon the general question. I had thought that the object of my communication was sufficiently evident; it was neither that of refuting, nor of advocating, any theory or theories relative to the functions of the muscles and nerves of the eye-ball. If it had been intended as an attempt at the former, I should certainly have entered at length into the consideration of the two theories to which I briefly alluded—those of Sir Charles Bell and Mr. Mayo. Neither did I attempt to advocate the theory of Messrs. Hunt and Walker: my simple object was that of calling the attention of those interested in these inquiries to a single fact bearing upon the question—a fact certainly not generally known to anatomists, and not even alluded to in the various professed treatises on comparative anatomy: I allude to the distribution of the sixth nerve to the suspensory muscle. In reference to the function of this muscle, I stated that "I inclined to believe" that it was a suspensor rather than a retractor of the globe, admitting, however, that it might be both. This opinion I hold, not only in common with Willis (whose theory, stated in rather broad terms, is quite caricatured by Mr. Shaw), but also with Briggs, Munro*, Grant†, and Porterfield‡. Cuvier, Elliotson, and Owen, would also appear to have the same view of the function of this muscle; for they all denominate it not retractor, but *suspensorius* oculi. Some of these names may, perhaps, be sufficiently modern to be "authorities in physiology," even with Mr. Shaw, who, one is almost inclined to think, receives nothing as authority upon this subject that was written prior to 1823. The view of the function to which I merely stated "that I inclined," —though Mr. Shaw speaks of my giving it my "especial approbation," and even of my "admiration" for it—I endeavoured to support by an argument founded upon a fact in the anatomy not even alluded to by Willis; and for which, as an original observation, I might, perhaps, "claim some credit." The very disproportionate nervous supply of the suspensory muscle (compared with the abductor as one to four), is a fact, the importance of which I should suspect will not be denied; but the reference to it, and its application to the view taken of the function, is totally passed over by Mr. Shaw.

I look upon the theory of Mr. Hunt and Mr. Walker to be one referring simply to the *primary* functions of the muscles of the eye-ball, and to their mutual connexion; and therefore to be a theory not necessarily inconsistent with some other views relative to their *secondary* and *related* functions. Of this character, I think it not unlikely, are some of the views of Sir Charles Bell, and perhaps some of those in particular which relate to the mechanism of the third eyelid of the mammalia, a knowledge of the existence of which, Mr. Shaw, in the most considerate manner, appears disposed to deny to me.

The "original theory" to which Mr. Shaw alludes, as explaining the reason "why the sixth nerve in man should supply the abducens muscle of the eye exclusively," we find that Sir C. Bell merely speaks of as "a surmise," and candidly says that "in accounting for a certain peculiarity in the action of the sixth nerve, we *have not* a very satisfactory reason why it should be solitary in its origin and course*." Upon Sir C. Bell's own shewing, therefore, I come to almost precisely the same conclusion as to the defective character of his theory of the nerves and muscles of the eye-ball, as that which I took in my former communication.

There are, however, I believe, many points connected with this subject, when taken in all its bearings, which yet remain to be made out, and that especially as refers to the comparative anatomy; and some of these I hope to have the leisure to prosecute, and would invite others to enter into the same field of inquiry. It is, I believe, in this way only that we shall be enabled to arrive at a satisfactory conclusion respecting a subject which has been more or less unsuccessfully agitated, almost ever since anatomy has become a distinct science.—I am, sir,

Yours very respectfully,

JOHN THURNAM.

Westminster Hospital,
Nov. 23, 1836.

* Munro's Comparative Anatomy.

† Grant's Outlines of Comparative Anatomy, p. 272.

‡ Porterfield on the Eye, 1759, vol. i. p. 92. This author thinks that the seventh muscle may also act in such a way as to prove subsidiary to the straight muscles.

UNION SURGEONS AND THEIR PAUPER PATIENTS.

To the Editor of the Medical Gazette.

SIR,

YOUR correspondent, "E. C. T.," wishes to be informed if I consider 11,800 persons to be the *pauper population* of the parishes

* Nervous System, p. 215.

contained in the Leighton Buzzard Union, and proceeds to tell me that Grove, in Bucks, has twenty-one inhabitants. In reply, I beg leave to inform him that I copied the advertisement, verbatim, from the *Northampton Mercury;* and who that reads the following sentences can conclude otherwise; particularly when we know that the parish officers, in many parts of the kingdom, have been long engaged in making out pauper lists for the guidance of Union surgeons?—"The Union consists of the following parishes: Leighton Buzzard, Billington, Eggington, &c. &c. &c. and comprises a population of 11,800 persons. The gentleman appointed will be required to devote his whole time to the duties of his situation, &c. &c."

Now, sir, why is the gross amount of the population named to a man who is to devote his whole time and attention to the paupers? What are the opulent classes to him?—nothing, except to tantalize him. You may just as well invite a man to a turtle or venison feast, at which all the celebrated characters of the county are to be collected, and, when he arrives, place him at a side-table, allow no one to speak to him, and feed him with cold potatoes. But to the point. "E. T. C." has not favoured me with the amount of the pauper population; a matter, let me tell him, not very easily decided, and liable to perpetual fluctuation. However, I shall probably be not very far wrong if I suppose it at something more than one-third of the gross population, or 4000 individuals. I will still maintain my argument, that no one practitioner could properly attend the sick occurring in that number, scattered through fifteen country parishes. "E. C.T." asserts, that "*all country practitioners are exposed to the same discomforts as the Union officers.*" That all country practices are attended with fatigue and inconvenience, are facts universally acknowledged; but there are very few country practitioners, if any, in extensive business, who attempt to take the whole burden upon their own shoulders; there is either a partner, a well-qualified assistant, or an apprentice—very commonly all three, who divide the fatigues amongst them, each taking his proper part, and all acting in unison. But is this the case with the Leighton Buzzard Union surgeon? Who attends for him? Who dispenses his medicine? His salary will afford neither partner nor assistant. Apprentice he can have none, for who will place his son to with a man residing in a parish workhouse? The parish pauper may lie and suffer for hours, perhaps days, and eventually die, because the Union surgeon is so occupied he cannot visit him. The rich man may send for another medical attendant, in case his usual surgeon is unavoidably engaged; not so the pauper—there is the Union doctor for him, and no other: but I explained this matter so fully in my last letter, that I need not enlarge upon it on the present occasion.

There is, sir, yet another evil, to which I am desirous of calling the attention of your readers; and this is, the separation of the poor into two classes—absolute paupers and independent labourers, as they are called (deliver me from such independence!). According to the old plan, the surgeon was engaged at a given salary (I am sorry to say, nothing like a proper remuneration for his services), to attend all the poor on every occasion of illness, midwifery generally excepted; nor was he very scrupulous as to who he admitted as a parish patient. Many a poor fellow, struggling hard to bring up a family in a respectable manner, has received medical relief for himself, his wife, and children, without a charge; the parish surgeon scorning to present a bill to a hard-working man, who could not afford to remunerate him properly: but according to the present system, none but the absolute pauper, whose name, age, occupation, and disease, are to be inserted in a weekly list, are to be considered entitled to medical relief, and the member of the Royal College of Surgeons is to be screwed down to the lowest possible farthing for attending them; and, by way of increasing his paltry pittance of a salary, is required to submit to the degradation of receiving halfpence squeezed from poor men's children, to remunerate him for his attendance on what are absurdly called independent labourers, subscribing to medical clubs. This, sir, is really scandalous. How is it possible for a poor man to afford any contribution to a medical club, whose wages amount to no more than seven or eight shillings a week, which is the average rate of wages in the agricultural neighbourhood in which I have resided many years? This poor fellow, be it remembered, is compelled to pay to the parish rates: if he can keep his wife and family from absolute starvation, it is in my opinion wonderful.

But if the poor do not really die under this wretched, pinching, starving system, to what will it tend? Open your ears, Lord John Russell! open your ears, ye Poor Law Commissioners! open your ears, all ye Boards of Guardians! and I will tell you. It will tend to the degradation of the human species; it will tend to diminish the physical strength and moral character of the people; and it will, ultimately, tend to the ruin of this nation. Poverty is a misfortune, not a crime. If a poor man's family be received into a workhouse, let them be properly fed and

suitably clothed, lest they fall into disease and become unable to work. Let the scale of diet be taken, not from the low diet of an hospital, but from the scale fixed for healthy soldiers and sailors. Work them hard; feed them well; and put them, as quickly as possible, into situations where they may support themselves. As for your independent labourers—men who are struggling hard for a livelihood—encourage them, assist them, and, in particular, give them medical relief without a charge.

If you deprive the poor of a proper quantity of nourishing food, and suitable clothing—for this I consider equally necessary—what have you to expect? That the children of the present day will grow up lax, feeble, dispirited, scrofulous wretches; and that the next generation will inherit, in a still greater degree, the debilitated constitutions of their parents. Where, then, shall we seek for the true John Bull? Where shall we find those brave determined characters to man our fleets and our armies—such men as I remember some five-and-twenty or thirty years ago, when Nelson, Collingwood, and Pellew, fought and conquered; when Wellington led his brave army through Spain and Portugal, and finally terminated the war in the ever-memorable and hard-fought field of Waterloo! The crews of those ships—the privates of those regiments—were men worthy the name of Britons. But the next time his Majesty's Ministers find it necessary to wage war against a foreign power, if the present poor law system be continued—alas! for our fleets and our armies: no longer must we sing "Britannia rule the waves." But I hope the matter will be reconsidered, and that the British flag will, for many ages to come, be seen to float triumphant, not only on our own seas, but every sea, even to the utmost boundaries of the earth.

I am, sir,
Your obedient servant,
AN OLD NAVY SURGEON.

Nov. 15, 1836.

THE PRIZE EXAMINATION AT APOTHECARIES' HALL.

MR. TEGETMEIR, who obtained the second prize, (not Teggemeir, as printed in our last), has written to say that the account we gave of the examination being partly oral, was incorrect. The statement of the examiner himself, we presume, should be conclusive. At the meeting of the Court, Mr. Ward said that on previous years the examination had been written, and *vivâ voce*; but that the adjudication was founded on the written answers. This year, however, he (Mr. Ward) *had combined both*; that is, the determination of the names and natural families of certain plants (constituting the *vivâ voce* examination) was proposed to the candidates at the same time that the written questions were put.

We have only one slight correction of our report to make—namely, that the lowest of the five first competitors had the number of marks assigned to the third.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 22, 1836.

Abscess	4	Hæmorrhage	2
Age and Debility	35	Heart, diseased	3
Apoplexy	10	Hooping Cough	5
Asthma	15	Inflammation	22
Cancer	1	Bowels & Stomach	8
Childbirth	4	Brain	5
Consumption	63	Lungs and Pleura	8
Constipation of the Bowels	1	Insanity	7
Convulsions	29	Liver, diseased	1
Croup	1	Measles	7
Dentition or Teething	7	Miscarriage	1
Dropsy	13	Mortification	2
Dropsy on the Brain	8	Rheumatism	2
Dropsy on the Chest	1	Small-pox	5
Erysipelas	1	Spasms	2
Fever	1	Stone & Gravel	1
Fever, Scarlet	5	Thrush	1
Fever, Typhus	3	Unknown Causes	13
Fistula	1	Casualties	10

Increase of Burials, as compared with the preceding week . . 13

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Nov. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 10	from 42	to 53	29·53	to 29·57
Friday . . 11	30	51	29·39	29·49
Saturday . 12	33	45	29·74	29·78
Sunday . . 13	43	56	29·65	29 55
Monday . . 14	34	45	29·54	29 67
Tuesday . . 15	28	45	29·87	29·92
Wednesday 16	39	51	29·88	29·65

Prevailing winds, S.E. and S.W.

Generally cloudy, except the 14th, and morning of the 15th, with frequent rain.

Rain fallen, ·6175 of an inch.

Thursday . 17	from 41	to 47	29·41	to 29·28
Friday. . . 18	33	43	29·02	29 15
Saturday . 19	27	43	29 17	29·15
Sunday . . 20	31	42	29 63	29 95
Monday . . 21	25	41	30·01	29.94
Tuesday . 22	32	41	29·85	29 69
Wednesday 23	35	46	29·22	29·41

Prevailing Winds, S.W. and N.E.

Cloudy, except the 18th, 20th, and afternoon of the 23rd, with frequent rain.

Rain fallen, ·1 inch, and ·075 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

WE have received Mr. Guthrie's lecture about St. John Long's Embrocation, but have not been able to make room for it.

ERRATUM.—In Mr. Shaw's Letter on the Nerves of the Orbit, *for* "third eye-lid or how," *read* "third eye lid or haw."

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THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 3, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture X.

The subject of Rape medico-legally considered—What is meant by the term in legal acceptation—Opinions of the Judges—Case of the convict Williams—Physical proofs of Rape—The sexual organs in the Virgin—Ambiguity of the signs of Defloration—Too little or too much proof—Evidence of emission ought to be sought for—Seminal spots; their physical and chemical characters—Spermatic animalcules described.

We shall next proceed to consider those abuses of the sexual functions which are connected with the commission of certain heinous crimes.

Violation.—"In all civilized countries," says Dr. Percival, "the honour and chastity of the female sex are guarded from violence by the severest sanctions of law. And this protection is at once humane, just, and necessary to social morality. It is consonant to humanity that weakness should be secured against the attacks of brutal strength: it is just that the most sacred of all personal property should be preserved from invasion: and it is essential to morality that licentious passion should be restrained, that modesty should not be wounded, nor the mind contaminated—in some instances, before it is capable of forming adequate conceptions of right and wrong."

The medico-legal consideration of outrages on chastity comprehends the cognizance of a variety of circumstances more or less indicative of violence offered to individuals of the other sex. The inquiry submitted to the professional examiner may either relate to the proofs of a capital crime, or those of a high misdemeanor; and it generally happens that the indictment is preferred, either for the completion of the offence—actual *rape*—or for an assault with intent to commit that crime,—and this according to the amount of evidence which the medico-legal inspector may be able to adduce.

Legal distinctions as to what is meant by Rape.—But let us determine, in the first place, what is meant by the law authorities, when they speak of the crime of rape. The ordinary definition seems clear; yet it is far from being so explicit as not to require further explanation. Blackstone says it is "the carnal knowledge of a woman forcibly and against her will;" but then, what are we to understand by "carnal knowledge?" for there are discrepancies on the point in the records of our jurisprudence. In common law, and in accordance with the decisions of many able and learned judges, emission has been held essential to the completion of the crime; and in order to conviction, there should always be either positive proof of that fact, or it should be inferential with a high degree of probability. The statute law, however, as enacted a few years since, seems to make carnal knowledge consist in penetration merely.

These are the words of the act [9 Geo. IV. c. 31. s. 18.]—"And whereas upon trials for the crimes of buggery and of rape, and of carnally abusing girls under the respective ages hereinbefore mentioned (viz. ten and twelve), offenders frequently escape by reason of the difficulty of the proof which has been required of the completion of those several crimes; for remedy thereof, be it enacted, that it shall not be necessary, in any of those cases, to prove the actual emission of seed, in order to constitute a carnal knowledge, but that the carnal

knowledge shall be deemed complete upon proof of penetration only."

Question of penetration.—Here you will probably say that the matter is perfectly clear; there can be no more difficulty; the law is well defined; and nobody can mistake the meaning of the statute. But not exactly so: the interpretation of acts of parliament is not so very simple as many people suppose. A *point* was made by some of the judges, not long after the promulgation of the statute just quoted, involving rather an intricate question. It was assumed that the statute could not be at variance with the common law, and that however the *evidence* requisite in proof of carnal knowledge might be altered, the *nature* of the crime remained the same. It was further argued, that the very wording of the statute confirmed this opinion; for it spoke of the *difficulty* of obtaining proof of emission, and provided that it should therefore be dispensed with, as not absolutely essential. Hence it was held that if emission could be negatived, or, in other words, if it could be proved on the part of the accused that there was no emission, the capital indictment could not stand.

But perhaps I had better read for you an abstract of a judge's charge, in which this view of the meaning of the statute is laid down. The case was a trial for rape (Carlisle Spring Assizes, 1832), where the prosecutrix proved *penetration*, and that *her clothes were wet*. Mr. Justice Alderson thus addressed the jury: "You must be satisfied that the prisoner penetrated her private parts with his: if you are satisfied of that, I shall submit to your consideration another question, viz. according to law it is established beyond all doubt, that on proof of penetration, a jury may infer completion of the offence—*the offence still consisting of penetration and emission*. But a doubt has arisen upon a late act of parliament, whether where no emission has taken place, the offence is complete by penetration only. I have no doubt, however, that it is for you, if you are of opinion that there has been penetration, to presume emission, unless the contrary is proved; and it lies on the prisoner to show that emission did not take place. If you are satisfied of penetration, but that no emission did take place, I shall reserve the question for the judges; but if you are convinced of the penetration, and in doubt or ignorance whether emission took place, I am clear you ought to find the prisoner guilty."

The jury did not trouble his Lordship to refer to the judges on this occasion: they acquitted the prisoner. But at the same assizes (Spring, 1832) for Worcester, a case was tried, which brought the question to an issue. John Cox was convicted of rape, upon the following finding of the jury;—"We are of opinion that *penetration* took place, and we are of opinion that *no emission* took place." Whereupon the judge passed sentence on the prisoner, but granted a respite, in order that the opinion of the judges might in the meantime be taken. In the next (Easter) term, the judges were accordingly consulted, when they gave it as their unanimous opinion that the conviction was right. Sir Gregory Lewin, however (from whose excellent "Report of Crown Cases on the Northern Circuit" the foregoing particulars have been borrowed), adds, that "the case was not argued before the judges by counsel:" so that we must not be too sure that the point is definitively settled yet.

But let us suppose—as we certainly have a right to do—that the meaning of "carnal knowledge" has been defined—that it signifies "penetration;" is there nothing further to be explained?—are the authorities all agreed as to what is meant by the latter term? It would appear not.

Some modern cases—among them, that of Cox, just now quoted—would lead us to believe that sufficient proof of penetration might be obtained, "although the hymen were not broken, and the vagina were found so small that even a finger could not be introduced:" in fact, the statute has been interpreted in its obvious sense, as implying that *any* introduction of the male parts within the labia externa constituted penetration. But a remarkable case, which attracted much public attention about two years ago—that of the convict Williams, who was sentenced to death for a rape committed on a child of eight or nine years of age—seems to have shaken the commonly received sense of the term, if not to have in a great measure stultified the law. It was urged by a medical man, who took a very active part in inquiring into the circumstances of the case, and who may be said to have saved the prisoner's life, that *legal* grounds for the conviction were wanting—that penetration was not proved; and, indeed, that from the relative condition of the parties—a grown man and a child under puberty—the fact was physically impossible. He maintained that there was no proof (as, indeed, there was not) that the hymen had been ruptured, and thence argued that there was no evidence of penetration: in support of which view, he adduced the authority of certain anatomists, who held that all exterior to the hymen is exterior to the body—that membrane forming the natural barrier through which alone admission could be obtained into the sexual parts. He further offered to prove that the male organ

of the adult *could not* be introduced into the undeveloped vagina of the impubcrous female. The Secretary of State, to whom these representations were made, was staggered by their force, or at least satisfied that sufficient care had not been taken to procure evidence of penetration; a respite was accordingly granted, and ultimately, it being found that however unquestionable was the moral guilt of the prisoner (the crime, in fact, was committed with circumstances of gross atrocity), the legal proof required by the statute was not had, —a commutation of the sentence was accorded.

Now if this case were allowed to form a precedent, it is evident that the present law of rape would, in a large proportion of cases, become a dead letter. It would be frequently impossible to convict a criminal who had committed the grossest outrage on a female child, and the proof of rape effected on adults would be rendered in the highest degree difficult: the ends of justice would be defeated. But some late convictions for rape on infants, show that no such precedent has been established: and notwithstanding the dissentient opinions of one or two of the judges—Baron Gurney, for example, and Mr. Justice Taunton—the law is likely to be henceforth interpreted in its proper and obvious signification.

It must be admitted that the point made by the gentleman referred to was ingenious; but I apprehend that the great body of anatomists would refuse their assent to the doctrine which he maintained—that the external sexual organs of the female, from the hymen outwards, were only the exterior of the body: for, independently of the difference of integument observed on the outer and inner portions of the external labia, it is contrary to all usage to assert that the labia interna, prepuce, clitoris, &c. are external parts. Besides, in the natural condition of the female organs, the opposite portions of the pudenda lie in contact; and, in short, it were perhaps as rational to say that a catheter introduced into the bladder was not really within the body, as that penetration would not be effected unless the actual vagina were invaded.

Physical proofs of Rape.

Evidence of penetration.—We have next to consider what are the proofs of penetration. These may vary, from the most slight to the most palpable. If we have no opportunity of observing them early, they may be greatly modified, if not entirely obliterated. But in general, in cases of actual rape, there will be found sufficient indicia of violence: the brutality of the offender will leave its traces; and the probability is, that, in the actual state of the law, mere penetration being as punishable as the most perfect completion of the carnal knowledge, the guilty party, who may be aware of that fact, will not be careful in attempting to save appearances. We may, therefore, when called to examine the person of a complainant a few hours after the alleged commission of the offence, expect to find such marks and tokens as may warrant our judgment respecting the true state of the case.

Defloration.—It mostly happens that the females who suffer sexual violence, constituting rape, are young, unmarried, or persons who have not had sexual intercourse before. The signs, therefore, resolve themselves into those of forcible defloration. Now, in order to be able to appreciate the indicia of defloration, or deprivation of virginity, it is necessary that we should be acquainted with the natural uninjured state of the sexual parts in the young female.

The female organs in their uninjured state.—The vulva is described, by Maygrier, as comprising the mons veneris, the labia majora and minora, the vestibule, the clitoris, the urethra, the hymen, the carunculæ myrtiformes, the fourchette, the perineum, and the entrance of the vagina. Some of these parts will need to be specially noticed.

The *mons veneris* is the prominence in front of the os pubis, composed chiefly of a quantity of fatty cellular substance. It begins, at puberty, to be furnished with hair, which is more or less abundant, according to the age, constitution, and habits of the party.

The *labia majora*, or *externa*, extend from the mons veneris to the perinæum. They are large in women of full habit. Externally, they are covered with integument, which is the continuation of that of the thighs, and contains a large supply of sebaceous follicles. Their internal surface is of a reddish colour, smooth, and consisting of mucous membrane; and the opposite sides are in contact, in their undisturbed condition.

The *labia minora*, or *nymphæ*, are two membranous folds, erectile, and of a bright red colour, commencing from the prepuce of the clitoris, and broader in the middle than at the extremities. They are very large in female children at birth, but of a moderate size in the adult. It is to be observed, however, that the size of the nymphæ varies very considerably, according to the age of the individual, the country she belongs to, and the maladies that may have affected the part. It has been sometimes necessary to remove them with the knife; nor is the operation usually attended with any unpleasant consequences.

Between the clitoris and the orifice of the urethra, and bounded laterally by the nymphæ, is a triangular space, somewhat

depressed, and, in uncleanly persons, containing a quantity of sebaceous matter. This is the *vestibule*.

The *clitoris* is an elongated tubercular body, lying within the upper commissure of the nymphæ, and commonly concealed by the labia externa. It is of different size in different individuals. In the well-formed virgin it is small. But we have seen, in a former lecture, that the part is sometimes so large, in certain females, as to assume the appearance of a penis. It is composed of an imperforate glans, encircled with a membranous fold, which forms for it a kind of prepuce,—of a cavernous body, fixed by two roots to the descending branches of the pubis, and connected with the symphysis by a sort of suspensory ligament.

A little papular prominence containing an aperture is observed at the base of the vestibule. This is the urethral orifice. The urethra itself is capacious, but not much above an inch long.

The *hymen* is a membranous fold, differing in size and shape in different females, and formed of the mucous membrane of the vulva, just as it dips into the vagina. It is situated at the posterior and lateral parts of the orifice of the vagina, so as to close the passage more or less completely. In general, the thickness of the membrane is inconsiderable; but occasionally it is both considerably thick and tough. With regard to form, it is most frequently semilunar, sometimes elliptical transversely, or nearly circular, with a central aperture. In some rare cases it is without any aperture: it is imperforate; when it prevents the menstrual discharge, and must affect the health. An operation is, under such circumstances, requisite.

Some eminent accoucheurs inform us of a remarkable fact, that they have sometimes found the hymen so strong and unyielding as to interfere with the progress of a labour; in which case they have been obliged to free the passage by an incision. The fact is well worthy our attention, as medical jurists, since it shows that not only sexual intercourse, but impregnation, may be effected without any rupture of the hymen. On the other hand, the absence of this membrane, in the opinion of many, warrants the supposition that it was destroyed by some mechanical means; but it is considered that some very slight accident may lead to it: it may have occurred in childhood, for nurses sometimes, in rubbing dry the sexual parts, may break the hymen; or inflammation with ulceration may supervene, and obliterate that emblem of virginity—which may thus be too hastily presumed to have been lost, when it happens simply not to be present.

Carunculæ myrtiformes is the name given to certain little reddish tubercles, of different shapes, round or flat, which are formed, as most authors believe, of the debris of the hymen, but, as Beclard has endeavoured to show, of the mucous membrane which is puckered or gathered in those parts. If this latter opinion were correct, carunculæ ought sometimes to be found contemporaneous with and previous to rupture of the hymen; they are, however, rarely, if ever, found, save in the absence of that membrane. Their number varies from two to five or six, and their colour and consistence depend on the constitution of the female: they may be of a bright scarlet hue, or they may be pale and livid; they may be firm, or soft and yielding.

The *fossa navicularis* is a little depressed space, lying between the lower part of the orifice of the vagina, and the posterior commissure of the labia externa, which latter part is often denominated the *fourchette*. And lastly, the *perineum* is the space lying between the fourchette and the anus; it has a raphe, and is shorter and narrower in woman than in man.

The *vagina* itself requires to be partially noticed. In the virgin state (and frequently after repeated acts of intercourse), it has the appearance of a passage, the opposite sides of which are in contact. The mucous membrane with which it is lined exhibits numerous *rugæ*, running transversely along the floor of the cavity, and lost on the walls. These rugæ are principally found in the anterior and lower portion of the vagina; and they are said to become obliterated sometimes by forcible connexion.

Signs of Virginity. — Such is a brief sketch of the natural condition of the sexual parts in the young unmarried female; and I may now add that *physical* virginity (as it is called) is usually considered as consisting in such a combination as the following: — the fresh colour, firmness and elasticity of the labia, the integrity of the fourchette, the presence of the hymen, or at least of the carunculæ myrtiformes, the narrowness and rugose condition of the vagina, and finally, a plump elastic condition of the breasts, which remain firm without support. Some add as further signs, the difficulty experienced in a first intercourse, the pain felt by the female on that occasion, together with a show of blood, in consequence of the laceration of the hymen.

Should all the preceding signs be met with in one and the same person, the fact of virginity is rendered highly probable. But the truth is, that perhaps not one in a hundred would be found *intact* in this strict sense, while the absence or modification of several of the said signs by no means rebuts the

claim of purity. For instance, there are many natural causes which would affect the state of the labia, such as disease, discharges, &c., without necessarily inferring that there had been sexual intercourse: while on the other hand those parts have been found to possess all their elasticity and apparent integrity, in young women who unquestionably had connexion. Even the hymen itself, as we have seen, may be absent without necessarily compromising the virgin character of the female. This membrane does not appear to be an essential attribute of the sex. Most virgins may have it, but many are without it. Again, instances have occurred in which virginity has certainly been infringed, without loss of the hymen. It may be very relaxed at the menstrual period, and may yield without laceration under such circumstances: and we have already mentioned that impregnation has been frequently known to have taken place without rupture of the membrane. Capuron relates an instance of his having attended a woman in labour, where the expulsion was powerfully impeded by the resistance of the hymen. He incised the membrane, which had naturally in it only a very small aperture, and shortly after, a pair of large and lively children were born. And finally, the membrane may have been lacerated otherwise than by copulation.

As to the carunculæ myrtiformes, they are not universally found, even where there is naturally no hymen; and they are generally considered as the relics of this membrane; so that their presence would rather be an indication of unchastity than otherwise. Narrowness, or constriction of the orifice of the vagina, is not peculiar to virgins, and it may be artificially imitated; while the contrary state, which may possibly be owing to leucorrhœal discharge, profuse menstruation, &c., does not necessarily imply that there has been a loss of virginity.

The firmness of the breasts, and muscular system generally, is but a vague sign of chastity: many widows and mothers might compare with undoubted virgins in this respect; while the opposite condition might be traced to physical and moral causes wholly unconnected with any infraction of sexual purity.

As to the other supposed signs of virginity, namely, the difficulty of a first connexion, the alleged pain experienced by the female, and the show of blood, they are of too fallacious and uncertain a description to merit the attention of the medical jurist. The first may certainly arise from relative disproportion, but may also be effected by the use of astringents, while the others may be feigned.

Ambiguity of the signs of defloration.—Thus we observe that the signs of defloration may be very ambiguous, and the more so, where little or no violence has been used, and perhaps only a single act of sexual intercourse has occurred. That there may be difficulty in pronouncing a decided opinion, even under circumstances where the reverse might be expected, is well exemplified by the following case, related by M. Parent-Duchatelet, in his valuable work *De la Prostitution dans la ville de Paris*:—"Several years ago, two young women of genteel appearance were attacked in the public streets by some young men, who called them gross and opprobrious names, and told the passers by that they were nothing better than common prostitutes. Some good-natured persons resented this conduct, and took the girls' part. A complaint was lodged on their behalf against their defamers, and the latter were summoned to appear before a magistrate. The defendants pleaded a justification, while the females, on the contrary, stoutly insisted on their purity: they even offered to submit to a personal inspection by a medical examiner,—which the opposite party dared them to do. A sworn inspector, a clever and conscientious man, was appointed by the magistrate, and the result of his investigation was this—that it was totally out of his power to say any thing certain in regard to one of the females; she might, or she might not, be a virgin; but for the other, she *probably* had had some intercourse with men, but he could not assert the fact positively. The issue of the dispute, I know not; but this is certain, that it subsequently came out that these same young women had actually been for some time entered on the registers of the police, and one proof of their being any thing but virgins, was, that they had both been, on several occasions, affected with venereal disease."

Forcible defloration.—We should not, however, be discouraged from investigation by such cases as these: we should remember that they are not instances of recent injury; and that it is generally known the sexual parts have an amazing facility in throwing off, after a time, the semblance of lesions. But the cases which we are now more immediately considering are those of *forcible* defloration, to the examination of which we are called *soon* after the alleged injury has been committed. The examples just alluded to may serve to warn us that we should lose no time: we should not defer our inquiry for a moment: the signs are evanescent, and if not speedily appreciated, are lost for ever. Solomon himself has compared the traces of lost virginity to the path of an eagle through

the air, a ship through the sea, or of a serpent upon a rock!

In recent cases of forcible defloration we should certainly expect to find some proofs of penetration; and those proofs would, of course, be the more convincing, the greater number of circumstances indicative of a disturbed state of the sexual parts that might appear. On the other hand, the probabilities would be the fainter the fewer the indicia. Laceration of the hymen, with marks of lesion, corresponding in their appearance with such as might have been inflicted at the time of the injury complained of, would afford a high degree of presumption of the fact; while an uninjured state of the parts would be a *prima facie* testimony against it. Where penetration alone is alleged, as having been forcible, though without rupture or laceration, we should expect to find bruises at least, or other indicia of violence about the external organs, as well as on other parts of the person. It may happen that, in consequence of a relaxed state of the sexual organs, from menstrual or other discharges, the marks of injury may not be very palpable; but even in the most relaxed condition, it would not be too much to expect evidence of injury, provided we are called in sufficiently early.

Suspicious cases. — But does it not occur to you, that light may be thrown on some cases by the complainant endeavouring to prove too much? The proofs may be redundant, or inconsistent; and when this is the case they will generally be found to be, not lacerations nor incised wounds, but, contusions superfluously produced, and without much regard to the appearances which ought to correspond with the alleged time of injury. The question may even be raised, under such circumstances, whether defloration, if it have really taken place, has been effected by the male organ? It is known that strange things have sometimes happened, when females have accidentally let slip foreign bodies, introduced for lascivious purposes, into the sexual parts. "The records of surgery," says Capuron, "supply us with many instances of surgeons being called in to extract from the vagina pessaries, glass phials, pomatum pots, and tweezer cases. And of what is not a woman capable, who is determined to be revenged on some faithless lover, or to get rid of one whom she detests?" M. Capuron then proceeds to shew how easy it would be for a female to inflict on herself such injuries as would ground a charge of violation.

A timely and judicious examination will generally expose fraudulent attempts of this kind. Foderé supplies us with an illustrative case. A female child, between nine and ten years old, was said to have been violated by several persons. The mother brought the charge against them, and was rather suspected to be acting with a view to extort money from the accused. M. Foderé was commissioned to investigate the affair. He found the sexual organs of the child to be perfectly uninjured: the hymen was entire, and the little finger could hardly be inserted into the orifice of the vagina. There were, however, some marks of violence about the pubes and the external labia: a red circle, about the size of a crown piece, was observed to be impressed on the pudenda, and it had all the appearance of having been recently made. This was, indeed, the fact; for by waiting a little it gradually disappeared, having evidently been produced by the indentation of a piece of money just before the visit of the medical examiner. If the mark had been the effect of great violence, such as was stated by the mother, it would have increased in intensity, with the usual effects of inflammation. It was thus discovered to be a gross fraud, and the complainant was driven out of court with disgrace.

Evidence of emission. — To return, however, to the question already started,— how are we to know, in any given case, that penetration, or defloration, was effected by the male organ? For it does not follow that the sexual violence might not have been perpetrated by some foreign body of a different nature. Here we are driven to moral or circumstantial evidence, unless we can devise some means of procuring physical indicia; and this obliges us to consider the question of *emission* as well as of penetration.

I mentioned to you, that as our statute-law now stands, it is no longer necessary to seek for proof that emission has been effected. In the former state of our jurisprudence it was of great importance to detect semen in the vagina (as was sometimes supposed to be done), or to discover marks or spots of it about the woman's garments. Now we cannot say that it is not so still; for in almost every case where the medical man finds that there has been defloration, or violent penetration of the vagina of a female, he can go no further—he may *presume*, it is true, but he cannot *prove*, more than that something, some substance or "voluminous body" (as the French reporters call it), had been introduced forcibly into the pudenda. The case is greatly altered, however, when semen is found about the parts, for it leaves little doubt but that a *man* has been there. The discovery of semen, then, is clearly of much importance to the English medical jurist; and pains ought to

be taken in every case of alleged rape, where a personal examination is allowed soon after the injury has been received, to inspect narrowly the sexual organs, with a view to the detection of semen, and to be sure to see the very clothes worn by the complainant on the occasion.

Seminal spots.—I know not how the presence of semen has been satisfactorily ascertained hitherto in this country; but I suspect that in cases where it was said to have been detected, the medical witness formed his judgment simply from the colour, and perhaps the smell, of the stains. Such evidence, however, would not at present satisfy a court of justice; for an assertion so weighty, and fraught with such serious consequences if made good, would be, at least, expected to be corroborated by the aid of chemical science. You will do well, therefore, to note the following observations, gathered from Orfila, for they seem calculated to render your evidence on this subject in a high degree satisfactory and valuable.

When seminal fluid, or what is supposed to be such, is found on a garment—a linen chemise, for example—it forms spots of greater or less extent, round or irregular, thin, greyish, or sometimes slightly yellow, which is best discerned by placing it between the eye and the light. Pressing the spots between the finger and thumb, we find them stiff, as if they were starched: they have no smell unless we moisten them with a little water, when they immediately emit the well-known seminal odour. Holding them before the fire, taking care not to scorch the linen, the spots become of a ruddy yellow; and very often other spots, not till then perceived, are brought out by the process. And what shews that the desiccation, or drying, is alone the cause of the appearance thus produced, is, that upon moistening the stains once more they become colourless, or lose that yellowness which they had just presented. This effect of heat on the stains of semen is characteristic; it does not take place with common mucus, or with morbid discharges, such as that of gonorrhœa, fluor albus, or the lochia.

If the seminal spot be dipped in water, it is moistened all through and evenly, not as if there were any fatty matter in its composition. Whitish filaments detach themselves, flaky; and if the fluid be evaporated, it assumes the appearance and consistency of a solution of gum. When still further concentrated, it exhibits an alkaline character, as is sufficiently attested by its effects on litmus paper. "If the evaporation be carried to dryness, the residue is semitransparent, like dried mucilage, glistening, of a ruddy or slightly reddish hue,: and this, on being agitated for two or three minutes in cold distilled water, separates into two parts, the one glutinous, yellowish grey, sticking to the finger like glue, insoluble in water, but soluble in potash; the other perfectly soluble in water. The watery solution is yellowish, transparent, and gives a white flaky precipitate when treated with chlorine, alcohol, acetate or subacetate of lead, and corrosive sublimate. *Pure nitric acid*, concentrated, communicates to it *a slightly yellowish tinge*, though it be colourless before: *nor does the acid cause any cloudiness in the solution* — which is a characteristic test — for nitric acid added to a similar watery solution of other discharges, such as the gonorrhœal, the lochial, &c. throws down a precipitate, or whitens the fluid invariably."

But you should know, that satisfactory as is this mode of testing the presence of semen, we can sometimes even go further. When we are called in very soon after the alleged violation, and find some fluid which we suspect to be semen in a free state—that is to say, not that which is found smeared on the linen of the complainant, but perhaps lying in the vagina—we shall probably be able to apply another test, which, if it succeed, cannot fail to be in the highest degree satisfactory;—I mean the detection of spermatic animalcules.

Spermatic animalcules. — By the application of the microscope we may be able to discover those animalcules peculiar to semen, which were first described by Leeuwenhöck, afterwards admirably examined by Spallanzani, and the existence of which Prevost and Dumas have proved in the semen of all male animals which have reached the age of puberty.

It was about the year 1770 that the Abbé Spallanzani made his valuable observations on this subject; and nothing that has since been ascertained impugns in any manner the correctness of his views. Here is the representation which he gives

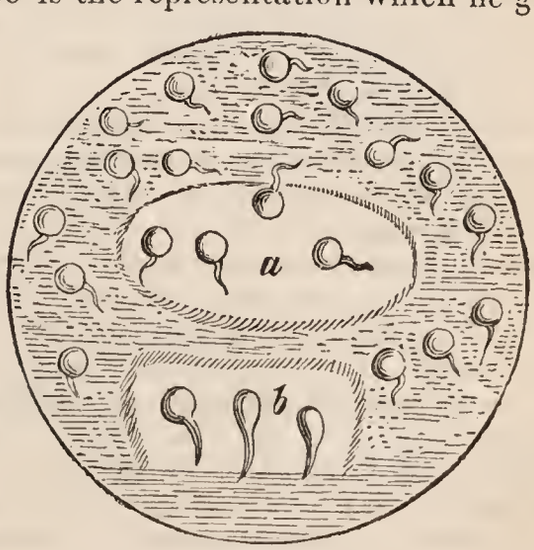

Fig. 16.

of the animalcules, as seen with a powerful glass, soon after they were taken from the human body.

Their figure, while in motion, is that in the space (*a*), spherical, with filamentous tails: when at rest, or dead, (for while alive they seem perfectly restless) the fluid about them being dried up, they exhibit the shape seen in the space (*b*), somewhat oval or elongated, with a tapering tail. "The bodies," says Spallanzani, "had two distinct motions; one oscillating laterally, curving the tail from side to side; the other progressive, advancing by means of the oscillation. During this, one would suppose them blind; they strike against every obstacle; and when amidst a number, make agitations and contortions, taking at last that way where there is least resistance. They are restless and continually moving."

The representation given of them by Buffon, is this; (fig. 17.) and it is the appearance which they generally present when viewed with a microscope of no very extraordinary powers.

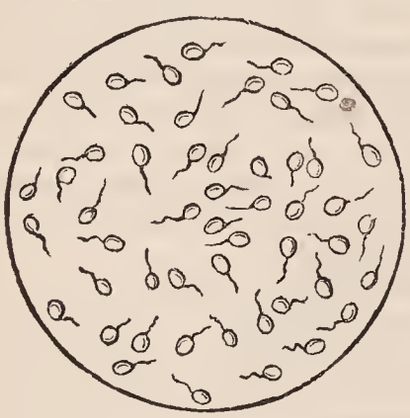

Fig. 17.

As to the actual size of these creatures, Leeuwenhoeck says he saw 10,000 of them moving freely in a space not larger than a grain of sand. They are smaller than the globules of the blood: Raspail thinks that they are less than the $\frac{1}{100}$th of a millimetre (about $\frac{1}{3000}$ inch Eng.), while the sanguineous globules are fully as large as the $\frac{1}{100}$th. They are, as nearly as possible, of the same size and shape in the semen of man, of the dog, ram, and rabbit.

Spallanzani, in his loose fashion of nomenclature, called these animalcules *vermiculi;* but the scientific naturalists of the present day classify them with *Cercariæ:* and "Cercaria seminis" is the appellation given by Mr. Owen to this human entozoon—"cui locus semen virile."

But I must not enter further into general considerations respecting spermatic animalcules, although so many temptations offer themselves in the odd theories which have prevailed respecting their in the animal economy. There are curious speculations on the subject in Spallanzani; but Prevost and Dumas have broached some of the most singular. Perhaps I may add, that the opinion which seems at present to be deemed most worthy of acceptation, is, that the Cercaria seminis supplies the *nervous* system, the vascular and other substance of the fœtus being pre-existent in the ovum.

These animalcules, however, cannot be observed in such a solution as that which I have just now mentioned as obtained from the spots on linen; for no doubt, by the process of drying, moistening, and transferring them from the cloth to the stage of the instrument, the creatures are destroyed, or at least so dismembered as to become unappreciable to our senses. If, however, we can obtain the semen, as I have said, in a free state, and cautiously submit it to inspection, the case will be different, even though the substance become dry. Orfila says he saw animalcules in semen which had been dry for eighteen years! But it is within the first half-hour, hour, or say two hours, after the emission, that the animalcules are most likely to be fully recognized: they are then seen in their peculiar shape—with their tails and their oscillations, performing those remarkable movements which are so characteristic of them, as to enable us to say, from simple inspection, that the liquor under examination, and in which they are found, can be no other than semen.

OBSERVATIONS

ON THE

NATURE AND TREATMENT OF LUPUS.

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In the following observations, which I have the honour to submit to the profession, upon the nature and treatment of lupus, it is my intention to confine the application of that term, often vaguely and indiscriminately used in nosology, to two varieties of erosive ulcer. One seated in the proper structure of the skin, the *dartre rongeante scrofuleuse* of M. Alibert; the other in an accessory part of the cutaneous organ, the *dartre rongeante idiopathique* of the same author. Proceeding in this manner, I hope farther to show, that those two, although resembling each other in many respects, yet differ in others, and consequently require certain modifications of treatment, which have not heretofore met with due attention.

Neither variety can be regarded in

the light of a malignant affection, for the reason that adjacent parts and organs are influenced, not by absorption, but simply by contact.

An affection, designated by some pathologists *lupoid tubercle*, developed at an advanced period of life, I am disposed to consider as one of a malignant type, yet bearing the impress of malignancy in an inferior degree, because implanted in a substance endowed with a low grade of vitality. It is, in fact, what I have elsewhere described as the primary cancer of the skin—the cancer of the cutaneous glandular texture, adverted to by M. Breschet, in his admirable Memoir*. On this account I decidedly protest against such misappropriation of the word lupus.

Lupus exedens, or eating tetter, has been defined a tubercular disease, inducing ragged ulceration of the skin. Dr. Bateman, in his Synopsis, has touched very lightly upon it, and assigns as a reason, that he can mention no remedy which has been of any essential service in the cure of it. To portray the amount and intensity of its depredations, analogous to the gnawing of some voracious animal, or the ravages of some insect, the epithets *lupus vorax*, *formica corrosiva*, were bestowed upon it by the ancient medical writers. By the Greek translators of the works of the Arabian physicians, it is described as the ἕρπης εσθιομενος, corresponding to the Latin *herpes exedens*. In France, it is called *dartre rongeante;* in Germany, *die fressende Flechte.*

The common locality of lupus is some portion of the face. I have, however, seen it attack the nates; and M. Alibert mentions an instance of its occurring on the breast. A remarkable circumstance connected with it is, that of its being usually solitary, confined to a single point of the integument. There all its virulence seems concentrated.

I. *Erosive ulcer of the derma.*—This form is by no means infrequent. It attacks both sexes indiscriminately during childhood and adolescence; at the period of life when there exists the greatest predisposition to affections of the cutaneous and glandular systems.

The individuals most liable to suffer from this particular ulceration are those of a fair, occasionally rosy complexion, with light auburn hair, grey or blue irides, and a tender skin. To a superficial observer, the general health seems unaffected; but on minutely investigating the state of the different functions, more or less derangement will, in the majority of cases, be detected in those of the chylopoietic viscera. The tongue is redder than natural, especially along the margins, and towards the extremity; its central portion presents a cream-coloured fur, through which the red papillæ project. The breath is more or less offensive; the evacuations from the bowels irregular and unhealthy. To these we may find superadded other signs indicative of strumous dyspepsia—an affection well described by Dr. Clark in his Treatise on Consumption.

From the survey of a considerable number of cases of this variety of erosive ulcer, I am led to coincide with those authors who look upon it as a symptomatic affection. It is generally dependent on some disordered condition in the functions connected with assimilation and nutrition. If, indeed, ever truly *localized*, it has either been preceded or accompanied, during some period of its course, by unequivocal marks of those errors of function to which allusion has just been made.

Dr. Macfarlane, in his valuable Clinical Reports, mentions that, in Glasgow, during the years 1818 and 1819, when the working classes were exceedingly ill fed, he had occasion to see a greater number of cases of lupus among the district poor under his charge, than at any former or subsequent period. According to M. Rayer, it has been at times extremely prevalent among the indigent in some parts of France, particularly the sterile mountainous regions of the Haute Auvergne, from scanty and unwholesome nourishment.

The affection is seated in the dermoid texture; and judging from the nature of the secretion emitted after ulceration is established, in the glandular body secerning that mucus, which, according to M. Breschet, becomes at a later period the *horny* matter*. On attentively examining the process set up prior to the ulcerative absorption of the epidermic layers, the following phenomena will be remarked. In some point of the attenuated and delicate integument investing the nose, cheek, or lip, a minute yellow-

* Nouvelles Recherches sur la Structure de la Peau. Paris, 1835.

* Op. cit.

ish speck appears, surrounded by a reddish halo. The point of the skin corresponding to this tiny abscess, believed to exist in the muciparous apparatus is removed by absorption. A mode of ulceration is at length established, which is generally superficial, not extending beyond the derma; and though accompanied with preternatural redness, yet rarely with any swelling of surrounding parts. It is characterized by its ragged edges, on a level with the base; by its pale mammillary surface, whence issues that peculiar secretion which rapidly concrêtes on exposure to the air, into greyish yellow crusts; and lastly, by its being the seat of hot smarting pain, and occasional pruritus. The furfuraceous crusts are soon detached, and fresh ones re-produced to supply their place; the affection creeping on meanwhile with insidious certainty.

After having subsisted for some time, the original type of the disease is modified, and in some measure obscured; the surface acquires a pink glassy aspect, and loses the papillary appearance it originally presented. When situate in a part where there is much loose cellular substance, the immediately adjacent textures become indurated, condensed, and assume a dusky red or purplish hue.

Ulcers of this kind differ extremely one from another in their degree of virulence. If the nose is primarily invaded, and particularly the inferior portion of the septum, as frequently happens, the ulceration advances by imperceptible steps, corroding and consuming every tissue, muscle, and cartilage, down to the very bone, which at times participates in the devastation. The mutilation thus produced is often hideous and irreparable.

That this is not purely a local disease seems further ascertained from the obstinacy with which it resists topical agents. I have seen nearly every description of stimulant tried, and myself employed the most powerful caustics, but never have known any permanent benefit accrue, unless measures have been conjointly taken to modify the state of the system at large. I adduce the two following cases, to demonstrate the comparative inefficacy of severe escharotics, even where an extensively varied treatment had been pursued.

St. George's Hospital, May, 1836.—Anne Paisley, aged 15, auburn hair, greyish blue irides, tolerably healthy complexion, gives the following history of her case:—

Between five and six years ago, she discovered a small hole in the lower part of the partition of the nostrils, which was constantly covered by a little dry scab. It occasioned no uneasiness. For twelve months previously, she had suffered pain in the back part of the head. At that period she was living with her parents in the country. Desirous to be rid of this crust within the nose, she consulted a physician, who prescribed tonic medicines, which were accordingly persevered in for a considerable time, without any good effect. After remaining in this comparatively indolent state for a couple of years, the affection at length extended to the exterior surface of the nose, in consequence of caustic having been applied by a surgeon in town. Since then the ulceration has slowly advanced, without intermission. The greater part of the nose, including the cartilaginous septum, is gone. The ulcerated surface, irregularly disposed, corresponds in character with the description above assigned, and is the seat of heat and smarting.

Has been for several months past a patient here of Mr. Cæsar Hawkins, who has left hardly any plan untried which science could suggest. As the disease seemed to baffle every sort of treatment, Mr. Hawkins determined to prove the effect of my preparation of the chloride of zinc*. It was accordingly applied from time to time during the

* The preparation of the chloride which I proposed and introduced into practice in this country, differs in a most important feature from that originally employed by M. Canquoin. The wheaten flour prescribed in the French formula is apt to envelop the chloride in a glutinous dough, which blunts its power, or at any rate tends to confine its action to the particles on the surface of the paste; but the anhydrous gypsum of my formula, while it can exercise no chemical action upon the chloride, forms a porous medium, through which the whole particles of the deliquescent chloride may transude upon the morbid albuminous tissue, with the effect of decomposing or destroying it with certainty to any definite depth. This preparation of mine has been adopted in several of the London hospitals, and has been found to be unfailing in its escharotic powers. It was probably owing to the counteraction of the vegetable *farina* that M. Sanson, the distinguished surgeon of the Hôtel Dieu at Paris, failed last year in the application of the paste—a fact communicated to me by M. le Doct. Nonat, in a letter dated Paris, Aug. 3d, 1835, of which the following is an extract. "Je sais que M. Sanson en a fait usage dans les cas du

months of February, March, and April, to the nasal ulceration, and likewise to two ulcerated spots which had formed near the centre of each cheek. Water dressing was applied to the eschar, and to the subsequent surface, in order to give the caustic a fair trial. Each application was attended with the most lively pain, and some inflammatory infiltration of the adjacent cellular texture. But the nature of the sore had undergone a change: it put on a sound appearance, and speedily healed. The cicatrization, however, was only partial, and in some places temporary. The disease still pursues its eroding course.

A little boy was sent to me in the spring, by Mr. Duffin, of Foley Place, for a similar affection to the above, occupying about one-half of the outer surface of nose, and extending to the cheek of same side. Beyond were traces of the *membranous cicatrix*, denoting the previous existence of the same kind of ulcer; and which I was informed had been healed by a skilful employment of strong nitric acid. There was a degree of ectropion referrible to the puckered contracted condition of the adjoining integument: the tongue presented the red dots on the grey fur. The boy had, in addition, a porriginous eruption of the scalp. In compliance with that gentleman's request I applied a thin stratum of the gypsum paste, the same as in the preceding case. Here the result was equally unsatisfactory, for the amendment was but of brief duration.

It is thus demonstrably evident, that the more powerful escharotics are inadequate to effectuate a radical cure of the affection in question, so long as the constitution is at fault; for no sooner has the effect of the escharotic subsided, than by a reflex action the sympathetic disease of the skin is again called into activity.

In the above cases the action of the remedy was to suspend for an interval that morbid equilibrium subsisting between internal and external surfaces. But no sooner had that ceased to influence, than the still existing, though latent, general cause resumed its ascendancy.

An opinion is entertained by some medical men that this species of lupus must run a certain course, or exhaust itself, ere its career can be put a stop to by any method of art. This is based, however, rather on imperfect truth than on fundamental error. When the disease is long left uncontrolled, a morbid habit is superinduced, which ordinary means fail to eradicate. But if measures be taken at an early stage to alter that peculiar condition of the system upon which the ulcerative process seems to depend, or with which it is associated, we have every reason to expect that that course will be materially abridged, and much disfigurement and mutilation prevented.

Now the chief indication is to correct the state of the digestive organs, and invigorate the system, by a proper regulation of diet, residence in a pure air, free out-door exercise; duly attending to the state of the cutaneous exhalation and alvine evacuations. Much benefit will be obtained, in most cases, by substituting for a too stimulating animal diet, one composed of farinaceous articles and milk. The patient must strictly abstain from fermented liquors, and have occasional recourse to bathing and gentle laxatives. Various alterative and tonic medicines, such as arsenic, mercury, iodine, sarsaparilla, with alkalis, steel, and sulphate of quina, will each in its turn, according to circumstances, constitute valuable auxiliaries.

When a visible melioration is perceptible in the general condition of the patient, when the different functions are all properly performed, then is the most favourable time for resorting to those topical remedies which act, not as caustics, but as powerful alteratives of the organic relations of the part. Among these arsenic claims the preference. Sir E. Home was in the practice of employing an aqueous solution of the white oxide of arsenic—arsenious acid. Dr. Macfarlane likewise advocates the use of the arsenical solution, because he has never known it produce local mischief or constitutional disturbance. His formula prescribes six grains to the ounce of distilled water. I can from experience attest its efficacy. The favourite application of Dupuytren was a powder consisting of one part of arse-

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Cancer du sein, et que jusqu'ici il n'en est pas satisfait. *Adhuc sub judice lis est.*"

The new, and I believe, important fact in animal chemistry, of the action of chloride of zinc upon albumen, to which I now add that of the nitrate of zinc, first observed and stated by me; and the consequences deducible relating to the morbid albumen of cancer, are peculiarities also to which I lay claim.

nious acid in ninety-nine parts of calomel.

A topical stimulant of acknowledged utility in interrupting the progress of lupus, is the red-hot iron: it often exerts a most salutary effect in modifying the nature of the sore, producing healthy granulation and prompt cicatrization. Among other metallic stimulants the solution of nitrate of silver is found to do good in slight cases. M. Canquoin, in his work on Cancer, speaks of the chloride of antimony as a veritable specific for the *dartre rongeante*. He advises it to be used in the following way. Let the whole extent of the affected part be touched with a pencil imbued with the chloride. About a couple of minutes after, the pain thus produced is to be allayed by laying on compresses dipped in cold water. In this way the energetic chloride is at once transformed into an inert subchloride. This operation is to be repeated once every ten days, until the sore heal. Some of the German surgeons recommend the immediate application of the corrosive sublimate. The inconvenience, however, with which its absorption into the system is fraught, must restrict its use to cases of very limited extent. I already noticed the nitric acid. Before resorting to topical measures, it is always expedient to remove the crusts by means of emollient poultices. If there be much pain and heat about the sore, cold poultices ought to be employed till these subside. It is sometimes advantageous to add a narcotic solution to the cataplasm.

The stability of the cure may be inferred from the character of the cicatrix. When the new skin is soft, free from tenderness, and nearly of the natural colour, it may be considered sound; but when it remains preternaturally red and indurated, or, on the other hand, presents a delicate membranous aspect, like an *arachnoïd* web traversed by minute tortuous blood-vessels, there is every likelihood of relapse. Under such circumstances it is incumbent on the patient to persevere in the therapeutic means above proposed; for it is only by repeated applications and unremitting attention that a cure can be accomplished.

This disease sometimes yields to the administration of internal remedies alone; sometimes, again, it spontaneously cicatrizes. Dr. Trüstedt, of Berlin, mentions his having cured lupus by means of the decoctum Zitmanni (a compound, slightly purgative, preparation of sarsaparilla), spare diet, warm baths, and the subsequent exhibition of sarsaparilla by itself*. This practice is similar to that recommended by Rust, one of the principal surgical authorities of Germany†.

II. *Erosive ulcer of the follicles.*—This frequently originates like a catarrhal affection of the Schneiderian membrane. By and by the inflammation, being, as it were, concentrated in one particular point, leads to erosive ulceration, which almost invariably terminates in perforation of the cartilaginous septum. The only circumstances whereby the patient's attention is directed to the mischief going on, are a degree of tenderness and fulness in the membrane, felt more especially on exposure to cold air; and the constant reproduction of crusts on the point of lesion. After a time, from cold or other determining cause, some portion of the external surface of the nose becomes inflamed, and ulcerates. One or other ala, by continuity of tissue, is commonly attacked. Small red angry-looking tubercles make their appearance, and are speedily converted into a spreading ulceration. The ulcer all along preserves the tubercular character: the apices of the tubercles are more or less concealed by dry, hard, tenacious crusts‡. As the disease proceeds, fresh tubercles are developed, and encroach more and more upon the healthy integument. The confines of the sore have a dusky red hue. This ulceration is always attended by loss of substance, and the havoc committed by it when unrestrained is often very great. The parts ordinarily destroyed are the cartilaginous septum and ala. According to M. Rayer, it may begin externally, and spread to the lining membrane of the nostrils secondarily. The disease, as stated by Sir A. Cooper, consists in ulceration of the sebaceous follicles. Hence, whenever the pre-existing irritation passes along from the internal mucous cryptæ to the external ducts, the ensuing inflammation induces oc-

* Med. Zeit. f. Heilkunde in Preussen, No. 11. 1833.

† Aufsätze u. Abhandlungen. Berlin, 1834, p. 377.

‡ According to Vauquelin, who subjected them to chemical analysis, the crusts consist of albumen, some animal mucus, and salts.

clusion of the orifices, succeeded by ulcerative absorption of the follicles. The papillæ, endowed with a higher degree of sensibility, and a greater capacity for resisting the process of disorganization, may now and then be recognized forming little vascular eminences, the adjacent textures having previously disappeared. Are we to ascribe to this circumstance the extreme sensibility of the morbid surface to the impression of any stimulus?

The present variety of corroding ulcer is seldom met with before puberty. It begins most frequently between the ages of fourteen and thirty; rarely after the fortieth year, although M. Alibert has adduced cases where it occurred at a later period in life. As with the former, so also with the present form of lupus, the subjects chiefly predisposed are those of a blond complexion, with light hair and irides, and undue development of the sebaceous follicles of the nose. The latter feature may be said to characterize and accompany this sort of ulcer. Although the phenomena of strumous dyspepsia are absent here, yet the patient is seldom of a robust constitution; he feels languid; most usually labours under symptoms of indigestion; has what is commonly termed "a weak stomach." Nor does he display the clear and blooming complexion indicative of health and vigour.

As respects the intensity of its progress, we observe great variation. In one individual its course is so slow as to seem almost stationary, while, in another, it runs on with rapid strides.

In combating this form of ulcer, so obstinate and intractable in its nature, it is indispensable, towards restoring a healthy action, that we should not only destroy the morbid habit of the part, but at the same time modify the organic relations of subjacent textures. This done, the lesion will spontaneously heal. Now this twofold object can be at once accomplished by employing the chloride of zinc paste above-mentioned. In very superficial cases, a solution of the nitrate of zinc in strong nitric acid, answers the same end*. This combination resembles, in therapeutic action, the chloride, but is less energetic. I prefer it to the *nitrate acide de mercure*, recommended by MM. Recamier, Jules Cloquet, and Velpeau. One or two applications of the *paste* will at most suffice. So soon as the eschar is detached, the healthy sore is to be treated with water dressing; or if there be much unevenness of surface, with narrow strips of adhesive plaster. These ought to be symmetrically disposed, and not interfered with until they drop off. Great circumspection must be observed in using this powerful remedial agent; for injudiciously employed, it may on one hand produce a dangerous degree of erethism, on the other only irritate the sore, and exasperate the disease.

Although internal remedies are here of minor importance, still the permanence of cure will be confirmed by a judicious application of the hygienic and therapeutic precepts formerly laid down. A milk and vegetable diet, by rendering the blood less stimulating, exerts a remarkable influence upon the state of the cutaneous capillaries. This is exemplified by the fact, that nothing tends more than such a diet to subdue that capillary congestion, that turgescence of the follicles, and also to diminish that morbid oily secretion of the skin, which may accompany or follow this affection.

There is one symptom we are generally called upon to treat, as a concomitant or sequela to the ulcer—namely, a sense of tenderness or rawness of the pituitary membrane, depending on chronic inflammation. It is allayed by protecting the part against external impressions, and especially that of cold, by plugging the nostrils with charpie, or the fleecy down of finely-carded cotton wool. Where the irritation has persisted for a period of years, and is attended with superficial ulceration of the mucous membrane, some astringent lotion ought to be thrown up once or twice every day. I have prescribed, with advantage, the following liniment, used by M. Canquoin for cancerous sores:—

℞ Ol. Oliv. ℥j.; Zinci Chlor. gr.xv. M. fiat linimentum.

The affected part is to be pencilled over with the liniment once a-day: in the course of a few weeks, by pursuing this plan, the membrane will be restored to a sound condition.

I subjoin the following cases, in

* Procured by dissolving one to two drachms of the fused nitrate of zinc in an ounce of aquafortis. The fused nitrate is, like the chloride of zinc, a powerful escharotic. I have produced, with a thin layer of a paste composed of it and gypsum, in the space of seven hours, an eschar about three lines thick: considerable pain and swelling accompanied its action. It is less deliquescent than the chloride.

order to illustrate the practice above detailed:—

Case I.—E. C. Deedy, æt. 21, of a fair complexion, light hair, greyish blue irides. I saw her on the 18th February last, by the request of, and along with, Dr. Roe, under whose professional care she then was.

Right ala nasi was the seat of erosive tubercular ulceration of the follicles. There was an inflammatory blush round about the sore, which was covered with furfuraceous crusts, and the souree of smarting, pricking, and occasionally shooting pain. The septum was perforated by a large aperture.

The affection commenced some years previously, inside of the cavity of the nostrils, and had progressively spread to the ala.

She had consulted many medical men, and tried a vast number of remedies, with the view of getting the sore healed, but in vain.

It having been agreed to apply the chloride of zinc, a thin layer of the gypsum paste was accordingly laid over the sore. No sooner had the eschar separated than the ulcer began to heal, and within fifteen days was completely cicatrized. For some time subsequent she took the decoction of sarsaparilla, by the advice of Dr. Roe. She now enjoys the most excellent health; the cicatrix is firm, white, and solid, and the redness of the apex has long since vanished.

Case II.—William Blake, æt. 22, clerk, light hair, and blue irides. The sebaceous follicles strongly developed on the surface of the nose.

I was asked to see him last spring, by Mr. Pettigrew, under whose care he was, on account of an erosive tubercular ulceration of the left ala nasi, which was in part eaten away. He gave the following history of his case:—About seven years since he was attacked with a distressing tenderness of the nostrils; soon after, the partition ulcerated. The ulcerative process continued for five years; it has destroyed the greater portion of the septum. Four years ago, a crop of pimples came out upon the side of the nose, in which originated the present ulcer. There is a deep redness all round the sore. Has tried numberless remedies, internal as well as external, but without benefit. Among others, iodine and sarsaparilla; which, without meliorating the local disease, have deteriorated his general health. Complains of increased sensibility of the lining membrane of the nostrils, aggravated on exposure to draughts of cold air. The chloride of zinc was applied to this most refractory sore, and the result of that application has been a permanent cicatrix.

I saw this patient within the last few days. The exterior of the nose remains perfectly sound, and the morbid irritability of the pituitary membrane is subsiding under the use of a milk diet, conjoined with the topical means described while treating of this particular symptom.

Case III.—Mrs. M***, residing at Westbourn Green, Bayswater, came to consult me for a corroding ulcer on the nose, by the recommendation of Dr. Roe. She is 32 years of age, the mother of a family: has chesnut-coloured hair, and grey irides, She informed me that the ulceration, which has the marked tubercular character, was referrible to an affection of the inside of the nose, attended with formation of scabs; that it began like a cold, upwards of two years ago: for in less than a year from that date, a little scab made its appearance on the left ala, accompanied with some inflammation. Leeches and poultices were applied, and a variety of internal remedies exhibited; and to the irritation caused by a single leech-bite she ascribes the formation of the present sore. The ulcer consists of a group of irritable-looking tubercles, covered with crusts, and accompanied with a dark-red hue of the adjacent integument. The cartilaginous septum is perforated, and a portion of the ala destroyed. Beneath the crusts she feels a constant itching, which changes to a sense of heat and smarting on their detachment. Her general health is indifferent. The sebaceous puncta are unduly prominent on the nose, which presents those minute varicose veins near the apex, termed by German pathologists *hemorrhoidal vessels*.

On the 25th June I applied a thin layer of the gypsum paste; in a few weeks after, a healthy cicatrix occupied the site of the ulcer.

She called upon me very recently. The cicatrix remains firm and unchanged. An amendment has taken place in her general health, she tells me, since the removal of the irritation maintained by the sore.

In each of the above cases the loss of substance is inconsiderable, and may be aseribed, not to the action of the remedy, but to the previous process of ulcerative absorption.

13, Charlotte-street,
Bedford-Square, Nov. 25, 1836.

INSTRUMENT FOR CLOSING RECTO-VAGINAL OR VESICO-VAGINAL FISTULÆ.

To the Editor of the Medical Gazette.

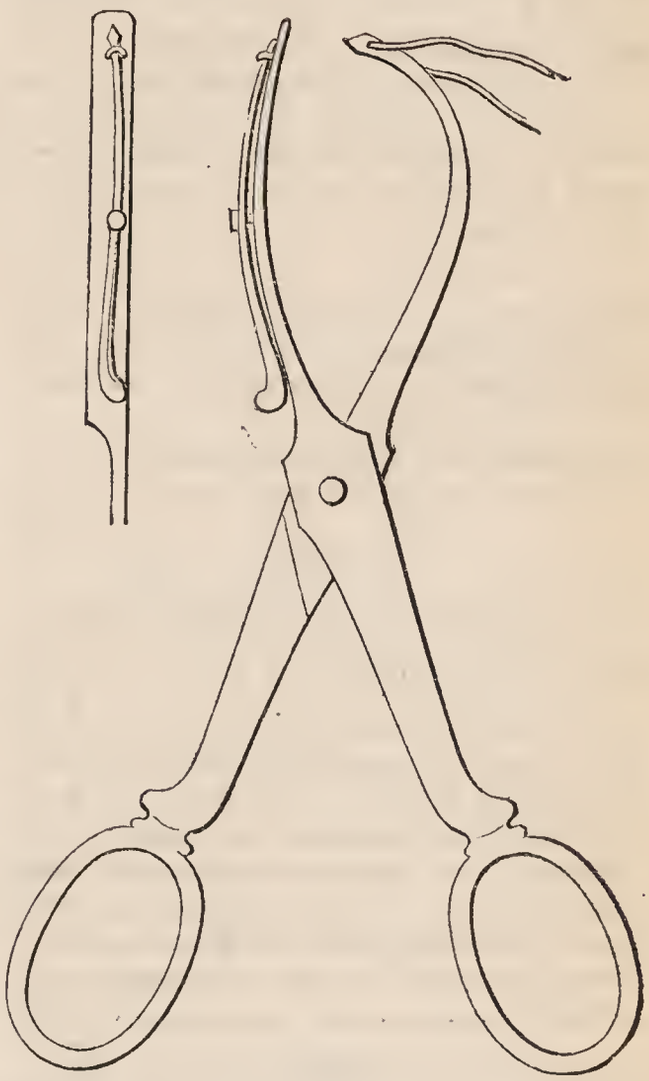
Sir,

I beg to transmit to you a description and outline of an instrument which I have invented, for the purpose of sewing together the edges of vesieo-vaginal and recto-vaginal fistulæ; in the former of whieh eases I assisted a friend to operate with this instrument a few days ago. The long diameter of the aperture in the bladder was situated transversely to the mesial plane, and large enough to allow the fore-finger to pass easily into it. The formation of the suture was not attended with the least difficulty, and occupied but a few minutes. I think, also, that the suture was of the best possible kind for the purpose; that is, the ligature could not cut itself out from the edges of the fistulous opening; for being passed double through opposite points of the aperture, a piece of bougie was placed within the loop of the ligature on one side, and another piece of bougie between the ends of the ligature on the other, so that the silk, when drawn tight and tied, eut only on the pieces of bougie, and the latter pressed together the edges of the aperture, forming the compound or quilled suture of the old surgeons.

The instrument, it is seen, is in the form of foreeps, one blade of which is a needle, curved towards its point, elose to whieh is its eye. The other blade is broader on its opposing surfaee, less eurved, and at its extremity has a hole (seen in fig. 2), through whieh the needle point, and just the loop of the ligature, are carried, when the blades are closed. On the back of the broad blade is a spring, which, when pushed forwards, the blades being previously elosed, catches the ligature on its point, and holds it.

Fig. 2.—*Back of the broad blade.*

Fig. 1.



In using this instrument the operator has only to seize in its points, in the same manner as he would with a pair of forceps, the border of the fistulous opening: the blades should then be elosed, and the ligature will be carried through one lip of the aperture. The opposite border is then to be seized, and the blades to be closed and held so. The spring on the baek of the broad blade is now to be pushed forwards, by which the ligature is eaught and held at its point. The blades are then to be opened and gently withdrawn, leaving a double ligature passed through opposite points of the fistulous aperture, so that a eommon or quilled suture may afterwards be formed.

I have the honour to be, sir,
Your obedient servant,
Wm. Beaumont.

47, Berners-street,
Nov. 22, 1836.

MEDICAL REPORT OF THE LUNATIC ASYLUM, ABERDEEN.

To the Editor of the Medical Gazette.

Number of Patients in the Asylum, 1st May, 1835 (date of last Report)	120	
Admitted between 1st May, 1835, and 1st May, 1836	37	
		157
Whereof were considered curable (of former number)	23	
Ditto (of the latter number)	26	
Total number of supposed curable cases during the year		49

RESULTS.

Dismissed between 1st May, 1835, and 1st May, 1836, recovered	20	
Ditto diito, convalescent, or much improved	4	
Ditto ditto, somewhat improved	5	
Ditto ditto, by desire of friends, unimproved	2	
Ditto ditto, of incurable and inoffensive, or otherwise improper patients	8	
Dead, ditto, (of recent cases)	4	
Ditto, ditto, (of old and confirmed cases)	7	
Total number dismissed during the year		50
Total number remaining in the Asylum, 1st May, 1836		107

From the foregoing table, it will be seen that thirty-seven patients have been admitted during the year; twenty-six of whom were considered, at the time of admission, to be curable, and the remainder incurable. The admission of so large a proportion of incurable patients is always much to be regretted, seeing they tend to injure the character of the Asylum, as an institution for the *cure* of insanity; and for this, as well as for other reasons, it does appear to be inadvisable for the managers to sanction the admission of so many patients of this description, *unless where they are distinctly proved to be furious, and dangerous to the public, and altogether unmanageable at home.* I am happy to observe, however, that the gentlemen of the visiting Committee, for the last two quarters, have shewn a desire to act on this principle; having refused to sanction the admission of idiots and other *harmless incurables*, who, it is very evident, cannot be benefited either in their mental or corporeal condition, by being shut up for life within the walls of an asylum, in a state of idleness, occupying the room that might be appropriated to others, with an infinitely greater prospect of benefit, as well to individuals as to the public at large, and to the character and general prosperity of the institution.

The table also exhibits the number of those who, in the course of the by-gone year, were considered to be fit subjects for the medical and moral treatment of the institution, and who, accordingly, have been duly subjected thereto. The total number of this class of patients was forty-nine. Twenty of them have been already discharged fully recovered: whilst four more have been sent home in a greatly improved condition, along with five others less improved.

It thus appears that twenty-nine, out of the forty-nine curable patients, have been more or less benefited by their residence in the Asylum, and already discharged; and that the number of cures is in the proportion of rather more than two-fifths of the number of those who have been placed under treatment, which is considerably above the average proportion of recoveries in most of the large public hospitals for the insane, as laid down in the statistical table, drawn up by Esquirol and others. And I may here also be permitted to observe, that a like proportion of recoveries has been obtained on an average of the last six years; for out of 279 patients who have been subjected to the curative treatment of this institution, within the period just mentioned, 115 have been recovered, exclusive of thirty-three who have been dismissed, partially recovered.

Of the four principal modifications, or species of insanity — viz. mania, monomania, dementia, or acquired fatuity, and congenital fatuity, or idiotism—the two first only are considered to be fit subjects for medical treatment; the two latter being generally believed to be hopeless, or nearly so. No less, however, than ten of these incurable individuals have been admitted during the year, and, in some of these instances, palsy or epilepsy was combined with the insanity. The cases of mania wherein there is general disturbance of

the intellectual functions, with violent excitement, are unquestionably by far the most favourable for cure; and it is surprising how soon a change for the better takes place in the condition of such persons, when removed from their friends and put under an early and judicious course of treatment. In several instances of this kind, a most striking improvement has been observed within a week or two after admission; and this has even occasionally happened when, for some weeks previously, the complaint had been pursuing its course with much violence, and without intermission: although it must be confessed, that in other instances, where the treatment has been so long deferred, hopeless fatuity has been the consequence. These are facts which, I think, cannot be too often or too strongly urged on the attention of the friends of insane patients, in order that they may learn, by a well-timed removal from home, to secure for them, as far as possible, the chances of a recovery; and thus to save them from the risk of that complete and permanent overthrow of the mental powers, which is so apt to ensue whenever the violent mental and bodily excitement, so characteristic of mania, is left to pursue its course uncontrolled.

The remedial means which have been adopted throughout the year, in the treatment of the different cases, have of course been varied, according to the nature and urgency of the predominating symptoms—insanity being a varied and complex disease, both as regards its causes and its phenomena. In regard to what is usually styled the moral treatment, I may just observe, that, in accordance with the established fact —that occupations of a kind fitted to engage the *attention* and encourage *exercise* in the open air, are highly conducive to the cure of insanity—every possible opportunity has been seized of giving effect to this important principle, so soon as the patient was brought into a state capable of being benefitted by it. I still, however, regret to say that the field of occupation is altogether inadequate to the exigencies of the establishment, so far, at least, as relates to the male side of the house; and consequently, that in this very essential particular, the institution is defective. I trust, therefore, that the managers will again take this matter into their earliest consideration; and I feel pretty confident, that when we are furnished with more suitable and constant employment than we at present possess, not only a greater number of patients will be recovered, but several others not susceptible of a *complete* recovery will be gradually trained to habits of regularity, and at length brought into such a condition as to render them in some degree useful members of society, and safe to be at large. It is hardly requisite to adduce any arguments in addition to those formerly embodied in a special report, which I presented to the managers in reference to this subject in 1834; it will be sufficient, I think, to quote the opinion of the celebrated Pinel. The following are the words which he employs, in speaking of an establishment in Holland, where the number of recoveries was very great, compared with other establishments in which employment formed no part of the curative treatment. "The patients are divided early in the morning into parties, some of whom are required to assist in various household offices, while others are conducted to the work rooms, furnished with the implements of their respective trades. But the majority are distributed, under the superintendence of the keepers, through a large inclosure, where they are occupied in gardening and agriculture. Uniform experience has proved the efficacy of these labours; and it is particularly to be observed that those of the higher ranks of life who live in the same Asylum, but in a state of idleness and sloth, retain their lunacy and privileges together, while their inferiors are restored to themselves and to society."

With reference to the causes which gave rise to insanity, in the different individuals who have been admitted during the year, we find that twelve of them were traced to hereditary predisposition; two to congenital imbecility; five to a highly scrofulous constitution of body; five to domestic afflictions—pecuniary embarrassments—grief, and other depressing passions; six to inebriety, and other demoralizing habits; two to an hysterical constitution, and previous attacks; two to an interruption of the uterine functions; one to injury of the head from a blow; one to child-

birth; one to epilepsy; and one to a severe febrile attack; whilst two arose from occult causes; in other words from causes which could not be traced, or had nearly escaped detection.

Notwithstanding, however, that such appear to have been the more prominent of the remote causes, there was unquestionably in a good many instances a combination of these in operation, all tending to the same end, some of them of a predisposing, and others of a more immediate or exciting nature. The causes of insanity are, indeed, often obscure; but in general it will be found that several have been acting simultaneously towards its production, and also, that, in a majority of instances, there is an hereditary predisposition to it.

I have only further to observe on this head, that four of the female patients, who have within these last six years been discharged convalescent, have been re-admitted after the lapse of some months, or it may be one or more years, labouring under fresh attacks; but that these secondary attacks have been comparatively rare amongst the males. Females would seem, from their peculiar habits of life and situation in society, to be at all times more under the influences of the moral than the physical causes of disease. And as it is very difficult, if not in most instances impossible, to withdraw an individual entirely from the operation of those of the former class, we are, I imagine, from this circumstance, enabled to account, in some measure at least, for the fact that they are more subject to relapses or recurrences of their complaint than males.

Eleven patients have died during the year. Seven of these were aged and confirmed lunatics.

A post-mortem examination was instituted in every one of those fatal cases (with consent of the friends), and the appearances carefully noted. Lesions of the brain or its membranes, and sometimes of both together, were found in all of them; and although the morbid appearances in this region of the body were not in every instance precisely similar, yet were they substantially alike. Other organs of the body were also occasionally found in a state of disease. Thus five of the male patients died with symptoms of palsy and fatuity, and in all of them were discovered unequivocal traces of disease of the investing membranes of the brain, along with copious depositions of a serous fluid beneath the same, and into the ventricles. Another male patient who had long been subject to epilepsy, and who died of ileus, exhibited disease of the brain, as well as of the intestines. The last of the male patients who died, and who was in a state of fatuity when admitted, also exhibited traces of cerebral disease. The first female who died had been long subject to insanity: she exhibited marked disease of the cerebral membranes. The second was a young girl, who laboured under congenital idiotism, and whose mother has been long an inmate of the institution: she died of pulmonary consumption, and exhibited a tubercular formation in the right hemisphere of the brain, besides extensive tubercular disorganization of the lungs, peritoneum, spleen, and other abdominal viscera. The third person who died among the females had been for some time subject to violent paroxysms of mania: she also exhibited traces of cerebral disease, and two tumors were found in the cavity of the abdomen, besides intense injection of the inner coat of the stomach and bowels; the one tumor was attached to the stomach, and the other to the liver, and the irritation which they had excited in the organs with which they were in contact, appeared to have operated as the immediate cause of the maniacal paroxysms. The last was a young woman, who had been long subject to epilepsy, and was fatuous at the time of admission, and who died from exhaustion, consequent on the violent struggles which she had long sustained: the brain and its membranes were in this case much injected.

In reference to this brief statement of the morbid appearances in the fatal cases, it is worthy of remark, that while five of the deaths amongst the males were preceded by a state of palsy, not one of the women exhibited this condition; and, moreover, that the morbid appearances were precisely similar in all those five cases. This circumstance I have also noticed in the fatal cases of former years. I can recollect, indeed, of only one instance of a female patient having exhibited symptoms of palsy during the last six years, whereas not less than a third of all the male patients

who have died within the same period, had, previously to this event, fallen into the state referred to. It appears to me, that we ought to look to the differences in the nature and mode of operation of the exciting and predisposing causes, to which the two sexes respectively are most apt to be exposed, in order to obtain an explanation of this remarkable difference in the *termination* of insanity, in male and female lunatics. The males, for example, are more exposed to powerful causes of a *physical* kind, especially the abuse of spirituous liquors, tending greatly to the production of *inflammation* of the brain, and its consequences; palsy being, together with derangement of the mental faculties, one of these consequences: while, on the other hand, the females are exposed to those *moral* causes which rather beget a state of *nervous irritation* than of inflammation.

Such of the patients as are in a quiet and composed state of mind, and are not impressed with delusions likely to be aggravated by religious exercises, are permitted to join regularly in public worship. The attendance of the patients on devotional duties, when conducted in public, and under the limitation to which I have just referred, has, I think, been equally productive of the good effects (particularly in calming the passions) that are reported to have accrued from it in other establishments of a like kind.

In conclusion, I have to observe, that amongst other arrangements for securing the welfare of the inmates, and a due regard to their feelings, and the feelings of their relations, it has been the practice for a considerable time past to deny strangers access to those departments of the house that are occupied by the patients during their waking hours, unless under particular circumstances; such, for instance, as in the case of a medical visitor, or one really in quest of useful information. The Aberdeen Asylum has, therefore, been rendered in this point of view as much a private establishment as any other which goes under that name; and as much so as is consistent with a just measure of public surveillance, always highly proper as tending to keep up its respectability, and to correct any abuses which might otherwise be apt to creep into such institutions. Thus no one can gratify idle curiosity at the expense of wounding the patients' feelings, whilst every thing that is fitted to meet the eye of casual visitors is still open for inspection.

JOHN MACROBIN, M.D.

Aberdeen, Nov. 11, 1836.

[We are happy to be able to add, that Dr. Macrobin has received the thanks of the Managers for the manner in which he has discharged his duties, and that the suggestions made by him in the above report have been acted upon.—ED. GAZ.]

BROMIDE AND IODIDE OF IRON.

To the Editor of the Medical Gazette.

SIR,

IN consequence of a paper which appeared in the last GAZETTE, respecting bromide of iron, by Dr. Kemp, of Cheshunt, I am induced to trouble you with a few remarks. It is more than two years since I first prepared it for the medical profession in town, during which time several have prescribed it; and from my own experience I venture to assert, that it has no advantage over the iodide of iron, as to its keeping when dissolved; one undergoes decomposition quite as soon as the other; but both are easily kept in a perfectly neutral state, by inserting a bunch of iron wire, or a coil of the same, long enough to traverse the whole column of the solution —I am, sir,

Your most obedient servant,

P. SQUIRE.

277, Oxford-Street,
Nov. 28, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The British Medical Almanack, 1837. Edited by W. FARR. Sherwood.

British Annual and Epitome of the Progress of Science, for 1837. Edited by DR. R. D. THOMSON. Baillière.

The Medical Almanack, for 1837.

Published by the Company of Stationers.

The Medical Pocket-Book, for 1837. By John Foote, M.R.C.S.

The first on the list is decidedly the *business* almanack for the profession: it is superior to any thing of the kind that has yet been produced; there are, however, several points in it which shew that the editor has not profited as much as he might have done by his three years' experience. We have met with some mistakes, and not a few omissions: nor are these of a trifling nature. It is both a great mistake and an omission, to set down all belonging to the College of Physicians in alphabetical order, putting the Fellows, Licentiates, and even the Candidates, in one common list; and the late statutes, so important to the medical public, are wholly unnoticed, as if they had no existence. The recent ordinance of the College of Surgeons respecting teachers of anatomy is omitted, although published in this journal nearly a month ago. "Wakley's Act" is left out—*query*, does the editor intend by this to express his opinion of its true value? The title of Doctor is unceremoniously taken from the hospital physicians and teachers, in London, by way of economising space (?); while it is partially given to those in the provinces. The school of anatomy belonging to St. George's Hospital is stated to be in Grosvenor Place, instead of Kinnerton-street. Mr. Bage is mentioned as assistant-apothecary to that hospital, instead of M. Depasquier. Creosote is talked of precisely as it was in last almanack (much of the pharmacopœial part being merely reprinted), as if nothing had been ascertained since regarding the real value of the medicine; and no antidote is given for arsenic except "hydrated tritox. iron in thirty times the quantity of the poison."

We are sorry, too, that we cannot give unqualified praise to the author of the paper on National Statistics; for he adopts a tone of censure and dogmatism throughout which we think is neither warranted nor becoming. A De Moivre or a Laplace could not, and we are sure would not, assume so magisterial an air. Perhaps the more modesty a writer evinces in laying down principles in statistical science the better: statistics are only in their infancy; and it is worthy of the phrenologists alone to plunge confidently beyond their depth into a sea of assumptions, where there is nothing certainly known beyond the first few footsteps.

The price of the almanack, we must add, is very unreasonably increased: last year we had 160 pages for 2s.; this year only 216 for 3s.; while the supplemental matter contains so much that is really objectionable—unsuited, we should say, to the pages of an almanack.

The editor of the British Annual has aimed at the production of a yearly periodical suited to a much larger class of the community than that composed merely of the members of the medical profession. To the latter, as well as to scientific readers generally, he here offers a year-book on the plan of the well-known French *Annuaire*, only modelled so as to be more particularly useful to the British public. Besides containing all that is really valuable in the French production — *minus* M. Arago's essay, whatever it is to be for next year—the Annual before us is enriched with some excellent scientific articles. The editor himself supplies a paper on the Progress of Vegetable Chemistry, and the Rev. Baden Powell a comprehensive and able report on the recent progress of Optical Science. Mr. Woolhouse gives a sketch of the progress of Astronomy, and Mr. Davies a curious and learned history of Magnetic discovery. The whole forms a handsome little volume, with which we are very much pleased, and hope that the experiment may be as successful as it is commendable.

The Almanack of the Stationers' Company is a very poor affair. No pains seem to have been taken to procure correct lists of any establishments save those of the Metropolis: the returns, for example, of the Irish and Scotch Colleges are not sufficiently recent, and even the Metropolitan announcements seem scarcely to be relied on. If the Company cannot find some active intelligent medical man to edit their production in future, they had better not trouble themselves with providing an almanack for the profession.

Mr. Foote's "Medical Pocket-Book" contains much less than any of the others—yet has some of the things in

which the most bulky of the others is deficient; such as the new statutes of the Corporate Bodies, and the Medical Witnesses' Act. There is, however, in every way a littleness about it—half the bulk is blank paper, too scanty for memoranda or for any other useful purpose.

MEDICAL GAZETTE.

Saturday, December 3, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

OPERATION OF "WAKLEY'S ACT."

WHEN the Medical Witnesses' Bill had received the sanction of Parliament, and thus became a law, we ceased to dwell on the distrust which we had previously expressed of it; and, uninfluenced by any of those personal feelings which the parent of this defective act, judging of others by himself, has never failed to attribute to us, we gave to the measure our hearty and active support. Several editorial notices regarding it are to be found in our pages, and one entire article was devoted to its exposition. In reviewing our efforts in its favour, the only circumstance with which we can reproach ourselves is, that we were over-liberal, and in our anxiety to prop what was evidently so weak as to require assistance, suffered ourselves to be led into expressions more favourable than the result has proved it to deserve.

The Medical Witnesses' Act—notwithstanding that it was drawn up, we are informed, by his friend Mr. Theobald, the special pleader, and lecturer on Medical Jurisprudence—has proved a failure. — The labour and responsibility to which it exposes all our professional brethren, but especially the general practitioner, are most inadequately remunerated by its provisions; and the recompense which the law allows is clogged by so many impediments to its acquisition, as to have in many instances rendered it altogether unattainable. To the fact of the fee being, under particular circumstances, wholly disproportionate to the sacrifice of time and talent, we have already in a former article alluded; but as this is a point which does not at first sight seem very apparent, we shall now more particularly illustrate it.

If the medical man were merely called upon to attend the Coroner's Court, and having given his evidence, at once to receive his fee and retire, the sum awarded to him would doubtless be sufficient; this, however, is very far from being the case, as the subsequent details will shew. But besides the trouble and loss of time which, according to the present system, attends the attempt to obtain remuneration, there is this great defect in the act—that however often an inquest may be adjourned, and however often the witness may be compelled to be present, his collective attendances are nevertheless reckoned but as one, and entitle him but to a solitary fee. Now one effect of the bill has been to induce coroners to dispense with medical witnesses as much as possible, so that they are chiefly had recourse to in cases of obscurity, and in such, one sitting is often insufficient to lead to a decision. The witness, however, has to be in attendance; and instances have occurred in which the Coroner has sat four or five times upon the same body; while we have the *ex cathedra* assurance of the member for Finsbury himself, that however often the witness may have attended under such circumstances, he is entitled to no more than one guinea. It is quite obvious that the estimate here formed of the value of a medical man's time is preposterously low, and that one tithe of the real interest for the profession to which the father of this

act lays claim, would have induced him to make the fee a guinea at least for every separate day on which the witness was compelled to be present.

But again; if a post-mortem examination be required, another guinea is awarded—no more, certainly, than the service merits. Well; having earned his additional guinea by a laborious autopsy, it may be that the evidence is not yet sufficient, or the worthy Coroner or the jury may be fond of scientific pursuits, and choose to have the contents of the stomach analysed. The witness is instructed to enter upon the required manipulations. Here begins by far the most difficult, the most tedious, and the most delicate portion of his task — one requiring apparatus, reagents, skill, and time. All these, however, we shall suppose have been at his command, and he appears once more before the Coroner, to communicate the result of his researches. What remuneration, most courteous reader, should you deem sufficient for all this time and scientific labour? At what do you conceive the framer of the Act estimates this part of the services of the general practitioner, on whom he professes to have bestowed so great an obligation?—why simply and absolutely at *nothing*. It may appear incredible, but such is the plain unperverted truth. Not one *sous* is awarded for the analysis. The contents of the stomach cannot be examined without opening the body; if the body be opened, the party is entitled to a guinea for having done it; and if he be "ordered" to institute the laborious chemical process alluded to, he gets not one farthing more. True it is, that the *honourable* framer of the act is pleased to say, that if the witness analysed the contents of the stomach, the Coroner would be "justified" in giving an order for another guinea. Oh, most provident legislator!—most wise and upright expounder of the law!—already do Coroners hesitate in giving one guinea for such examination, notwithstanding that the law allows it; yet would they be "justified" in giving an order for more, although such proceeding would be in direct violation of this learned commentator's own "act." Overseers, already indisposed to pay, would delight in this as an infringement of the statute — which would assuredly "justify" them in refusing the whole. A rare expounder of his own wise act, say we again—yea, a second Daniel!

But however monstrous and absurd the above declaration of our contemporary may be in other respects, it is at least of value in this—it is an admission that his Bill has provided for the witness less than his services fairly merit;—a defect which we pointed out some months ago.

We have hitherto assumed that what the act professes to bestow, the party entitled to it can readily obtain, but we regret to say that the statements which have appeared in the daily papers, and the repeated applications which have been made to us on the subject, clearly prove that obstacles of the most vexatious kind present themselves: medical men are called upon as witnesses, and then on seeking for their fee, frequently do so in vain: some instances there may possibly be in which the fee has been obtained,—but there are already numerous examples in which it has been refused altogether.

It is quite clear that, as the law stands, the medical witness is entitled to a fee; and seeking an explanation of the difficulty he experiences, we find two circumstances which mainly lead to this result; the first is, the disreputable parentage of the Act, which has taken from it all the moral influence which is calculated to assist the operation of a new law. Parish authorities have in

their wisdom conceived a notion that, as it is only "Wakley's Act," they are "justified" in resisting it. This is the doctrine maintained in a public letter addressed some time ago to the *honourable* member for Finsbury, by "an Overseer of St. Pancras," — of which letter, by the way, that worthy has had the prudence to take no notice*.

But another and more important impediment to the operation of the act is, the facilities which its defective construction affords to evade the demand. In order to become entitled to his fee, the witness has numerous steps to go through; and first, he must be certain that he has got a proper "order" to attend. His actually attending,—the requiring and obtaining of his evidence by the coroner's court,—avail nothing, if the slightest imperfection or irregularity exist in making out his summons; and in this manner, from accident or design, many have already been cheated of their money. Secondly, having attended, he must procure another "order" from the coroner for the sum to which he is entitled. It might, indeed, be supposed that no risk could be incurred here, if the preliminary step had been attended to; but not so,—the coroner may demur; and in various instances has done so. True there is redress—most satisfactory redress; for we are told by the *honourable* authority above alluded to, that the party aggrieved has only to bring an action in the Court of King's Bench against the recusant coroner. Oh, most happy device!—most profitable pastime!—bring an action to recover an "order" for the sum of one pound sterling; which order, when procured, *if procured*, may or may not be honoured! And this brings us to the third stage of this eventful history—that, namely, at which the witness, having seen to the correctness of his first order—and having attended—and having given his evidence—and having made a formal application to the coroner for an order for his fee, more lucky than many, has obtained it. Thus armed, he now proceeds to the overseer; but this functionary probably cannot venture, upon his own responsibility, to make so great an outlay, and desires him to call again: perhaps he requires a consultation with his colleague in office, or with the other parish authorities; and after laying their wise heads together, they resolve to refuse the fee, and let the "Doctor" do his worst. This is bad enough; but still, as we are assured, there is redress: he may go to law a second time—aided, too, by all the experience which his former suit has afforded him.

These are no imaginary evils—no merely supposititious cases—the several obstacles to payment above enumerated having actually occurred, and having been brought within our cognizance by the complaints of correspondents. There are numerous instances in which medical men have been fain to go without their fee, after having been put to a great deal of trouble. But however harassing and vexatious this may be, no one has hitherto been provoked into the imprudence of going to law for so small a sum.

Now these considerations have certainly altered our opinion of the practical benefits to our profession likely to result from "The Medical Witnesses' Act;" and we have freely given expression to those misgivings. But we were not prepared for the indirect admission of its failure which our remarks (in the GAZETTE of this day fortnight) have drawn from the profound and upright legislator, with whom it originated. Conscious of what has occurred

* A Letter from an Overseer of Saint Pancras, to T. Wakley, Esq. M.P., Editor of the Lancet, repelling the unjustifiable Attack made upon the Overseers of Saint Pancras, for exposing his inefficient attempt "To provide for the attendance and remuneration of Medical Witnesses at Coroners' Inquests." London, 1836.

to many of those who have attempted to recover under his act, and anticipating what is to follow, he puts forth the cool and deliberate falsehood that WE have instigated overseers not to pay the fee; and follows this up with another assertion, equally mendacious—namely, the fifty-times repeated tale that it is our hatred of general practitioners which has made us do so. The latter assertion is an old trick of Wakley's, which does not require exposure; as to the former, we have merely to refer, in proof of its falsehood, to the articles upon the subject which have appeared in our pages. But further: the *honourable* member knows well, that even if disposed to injure his Bill in the estimation of overseers, such proceeding on our part would have been entirely one of supererogation; the letter above alluded to, from an overseer of St. Pancras, in which he is set at defiance, and his Act held up to "ridicule and derision," having been printed and circulated nearly *three months ago!*

That Mr. Wakley had chiefly in view his own glorification when he penned the Act, his sickening and merciless iteration of "our parliamentary labours" clearly proves; but that he also intended to confer a boon upon general practitioners, who must be principally called upon as witnesses, we nothing doubt. It was on the latter account that we encouraged the measure, and exerted ourselves in its favour. The importance attached to our co-operation by the *honourable* member for Finsbury, is proved by this—*that he sent us the Act in slips from the Lancet Office before it was published, so as to secure its appearance in the* MEDICAL GAZETTE a week earlier than could otherwise have been the case (viz. August 20, 1836). Again: uninfluenced as *we* ever have been by personal hostility, and preferring to forget for a moment the habitual prostitution of his pages to the vilest purposes, we farther besought the favourable opinion of the profession towards him, as one who, in this instance at least, had done his best to lay them under obligation. And so highly was this poor compliment of ours appreciated by our contemporary, that it was straightway transferred to his pages through the medium of an anonymous letter—*evidently written by himself.*

We cannot close this article without alluding, in terms of indignation, to the scandal of seeing an adventurer, to whom accidental circumstances, at a moment of political excitement, gave a seat in the legislature, endeavouring to convert this event, by indirect means, to the purposes of private gain. Not content with childish and eternal references to his own parliamentary career—heedless of its notorious failure and insignificance—he attempts to procure purchasers for his journal by holding out his own "act," *in terrorem*, over the medical profession. He publishes lectures on Medical Jurisprudence, and then appends as a standing notification, that the enactments of the Medical Witnesses' Bill render it impossible for practitioners to neglect the subject, "*without exposing themselves to the risk of irretrievable ruin and professional degradation.*"

Thus, then, it stands:—if the practitioner does not obey the summons of the coroner, he has the certainty of being fined 5*l.*; if he does obey it, he has a chance of getting an order for a guinea, which he is at liberty to recover—if he can; but if he has not purchased *Lancets* enough to enable him to make a good figure in the court, then is he exposed to "irretrievable ruin." Such are the obligations conferred on the medical profession by the legislation of Thomas Wakley, M.P. for the district of Finsbury!!

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CLINICAL LECTURE,

Delivered at St. George's Hospital, November 25, 1836,

By Dr. Seymour.

FEVER.

I spoke at our last meeting of those cases of fever which had been taken in a few days before, and which were under my care. All these cases are convalescent.

SCARLATINA.

There was one case of fever, however, which differed from the others, and of which I will endeavour to speak to-day—more especially, because it is a disease at present very rife in London, and the treatment of which is of very great importance. I allude to *scarlatina*, or *scarlet fever*, as it is called.

A case of this disease was taken in on Wednesday week, and is in York ward. It occurred in a youth named Charles Turner, æt. about 20. It is a very moderate case of the complaint, so far as the urgent symptoms are concerned; at the same time, it is better to take one of these ordinary cases, and explain the accidental circumstances which arise during its progress, than to take a very severe case, such as you may not see again for a great length of time. This man's case is called *scarlatina anginosa*. Nosologists have divided scarlatina into *S. simplex*, *S. anginosa*, and *S. maligna*. The latter is the same disease as the ulcerated sore throat of Huxham and Plenciz, and one of the most fatal diseases with which I am acquainted. This, however, is an unusual form of the disease; whereas, the other species is very common. The circumstances which accompany the disease make it of great importance, in a practical point of view, to attend to the eruption with which it ordinarily begins.

I should tell you that people have got an odd notion into their heads; they imagine that scarlatina means something else than scarlet fever. This, it is said, is to be attributed to the late Sir Walter Farquhar, who, to calm the fears of people, when it prevailed to a great extent, said that it was only scarlatina, and by using this diminutive, they thought it was another disease, whereas scarlatina is only the Latin name for all the varieties of the complaint.

The eruption almost always comes out on the second day of the disease, but sometimes not until the third. In the present case, two full days elapsed before the eruption appeared. This contradistinguishes it from measles, in which the eruption never comes out before the fourth day—a difference of time which enables us to form a correct diagnosis. The diagnosis between measles and scarlet fever, although sufficiently plain in general, is sometimes very obscure. The eruption is generally efflorescent, and not raised in the semi-circular form in which it occurs in measles, in addition to which it is almost always attended with a sore throat. In the early stages of the complaint, the danger of the patient is exactly in proportion to the degree of severity of the sore throat. In general the tonsils are swollen, and of a bright scarlet colour. About the second day there begin to appear slight eminences, which sometimes coalesce, forming sloughs. If they coalesce early, and the sloughs are ash-coloured, the disease is extremely dangerous; the impression made on the nervous system is so great, that the patient dies on the 2d, 3d, or 4th day of the eruption. Indeed, it was the death of patients under this complaint having been of a more than usually appalling character, which gave rise to the great efforts made by the profession generally to treat it. It was not, however, known to the ancient physicians, but described by Huxham, and great attention called to the severe epidemic which occurred in 1747. In that epidemic, two sons of the Right Honourable — Pelham, then Chancellor of the Exchequer, died within an hour on the same day. Of course such an event, particularly in the higher classes of society, was a subject of great excitement. I suppose that similar accidents happened frequently in the course of that epidemic. In consequence of this, physicians began to investigate the subject, and Dr. Fothergill produced a work on Ulcerated Sore Throat. In the case which we are considering, the throat early became violently affected. There appears to be a sympathetic effect on the nervous system, and patients are destroyed very rapidly. A boy, to my knowledge, may be perfectly well on Thursday, and dead on the following Saturday morning.

This patient was attacked on Sunday night with vomiting, rigors, and pain in the back—commonly preceding symptoms; and on the Wednesday morning, leaving Monday and Tuesday clear, he first observed red efflorescences on the skin; probably they came out a little earlier, but were not perceived. He had a blister applied to the exterior of the fauces, which I beg you to observe is, for reasons I will presently explain, very bad practice. The blister, however, relieved the swelling, and in this instance did no harm. The whole of the membrane of the mouth and throat became of a scarlet-red colour, and there

was some pain on inspiration referred to the scrobiculis cordis. The skin, when I saw him, was moist, an unusual circumstance; the pulse was 110, and not weak; and the bowels had been opened by medicine.

I mentioned that the application of a blister is always bad practice, and for this reason, that there is a great degree of irritation about the mouth and throat, and sometimes a blister acts as a direct stimulant, unless other remedies be used, and constant fomentation. In hospital practice this is doubly unjustifiable, because erysipelas is apt to come on. There was a nurse in the hospital not long ago, in whom this accident occurred, and she was in a very dangerous state. After the scarlet fever was over, she nearly died from the irritation of a blister inducing erysipelas. Where you think counter-irritation useful, a mustard poultice applied just long enough to excite redness, will be sufficient, and is often very beneficial. But in general, where the fauces are much inflamed and swollen, the application of leeches to the throat is the most effectual practice. In fact, your attention is directed, in the early stage of the complaint, to diminish the heat of the skin, which is excessive, and to reduce the swelling and inflammation of the fauces. If the heat of the skin be steadily above the natural temperature—and I should observe that in this disease it is more commonly above the natural standard than in any other febrile affection known in this country, being frequently 104° Fah.; and if the eruption be full and red—the best thing that can be done is to put the patient into a shower bath, or into a tub of cold water—cold affusion. But in private life people will not submit to this; they are greatly alarmed by it, and therefore the next best thing is to wash the body over with vinegar and water. This may be done several times a day, and the effect is, to diminish the heat of the skin. The next point is to get the bowels freely opened, and to diminish the inflammation. It is seldom that blood-letting is necessary; but if the symptoms are very violent in the early part of the case—if the skin be hot, and the eruption has already come out—there can be no objection to taking blood from the arm, though it is not often necessary.

With regard to getting the bowels open, swallowing is always a matter of great difficulty, but the object may be effected by putting a couple of grains of calomel on the tongue every four or six hours, and exhibiting, as soon as possible, two drachms of sulph. magnesia in an infusion of roses. In most cases this is sufficient.

I should say something respecting gargles. In the first place, it is seldom that a patient can gargle the throat at all, and then the simple inhalation of the steam of hot water is the only thing to which you can have recourse. If the patient can swallow warm bread and milk, it acts as a fomentation: the best gargle you can employ is hot barley-water. Do not begin in scarlatina with an astringent gargle, for I have seen very serious effects arise from it; the throat has become more inflamed, the patient a great deal more distressed, and the practitioner, I remember, in one instance was turned out. Commence with applying warmth as much as you can to the throat, which relieves the swelling of the tonsils, and in the course of time the disease will go away. You must keep the bowels open by a saline powder, and place on the patient's tongue, at first every night, and in a short time every other night, two grains of calomel with sugar. This, with simple gargles, is almost all that is required in ordinary cases.

But the disease sometimes does not stop here; and you must bear in mind, that the most dangerous sequelæ in scarlatina occur after a mild rather than a severe eruption. These sequelæ are of various kinds. Sometimes inflammation of a serous membrane takes place, more especially of the pleura and pericardium. I have seen a patient come into the hospital with the secondary affection, and I have seen two quarts of matter taken from the pleura after death, in consequence of inflammatory action having been set up there subsequently to the decline of the original disease. I have known two cases in private life, where children died from inflammation of the pericardium, after they appeared to be safe. Inflammatory symptoms will sometimes take place in the serous membrane of the bowels; but this is not very common.

Another case which occurs after the subsidence of scarlatina is the swelling of the parotid and submaxillary glands. This frequently occurs, likewise, towards the end of continued fever, and has been looked upon as critical, as ending the complaint. If the parts slough, which they rarely do, it ends the case very decidedly; but if this symptom disappears, it is generally considered as not disadvantageous. I do not know whether this can be said to be the case in scarlatina.

The patient whose case is before us was admitted on the 9th, and I ordered two grains of calomel, and two grains of sugar, to be placed on the tongue every six hours, and two drachms of sulphate of magnesia to be given in an infusion of roses twice a day. On the 11th the eruption declined

rapidly, and the pulse was only 80. On the 14th the disease entirely disappeared. Nothing could be more easy than this. But though the scarlatina had disappeared, the case was by no means satisfactory as to the state of the patient. He was getting up his appetite, and so far things were favourable; but the time had not yet elapsed at the end of which he might be considered safe. From the 18th to the 23d day of the disease dropsy frequently supervenes, or an effusion into one of the internal cavities of the body: this is said to occur most frequently—I do not know how truly—where the desquamation of the cuticle is slow. The ordinary form of the disease terminates by the cuticle more or less separating; and it is said that dropsy occurs most frequently before it separates: I am not sure, however, that this is a just observation. On the 16th there was heat of skin, the face was very red, the pulse 100, and he complained of much pain in the back, particularly in the region of the kidneys. The urine which he made was exceedingly small in quantity, and very much loaded. I was exceedingly alarmed lest dropsy should supervene, and I had him immediately bled to twelve ounces, and gave him a sufficient quantity of supertartrate of potass to open his bowels freely. Instead, however, of this occurring, as I was afraid it would, the parotid glands on the left side swelled considerably, and likewise the submaxillary glands. Antiphlogistic treatment was used to get rid of this condition: leeches were applied, then an evaporating lotion, and the bowels were kept steadily open. Under these means this has disappeared: the patient still made little water, however, and I was afraid lest dropsy might supervene; I therefore kept him upon diuretic medicines, and ordered him a nitre draught, consisting of fifteen grains of nitrate of potassa in an ounce and a half of mint water, with a drachm of spirits of nitric æther, and twenty drops of tincture of squills. His urine was still loaded, and depositing a sediment. To-day his tongue is clear, and getting better. This is a good and instructive case as to what may occur in what was originally a very mild form of the disease.

I am rather inclined to think that there is in the present epidemic a mixture of disease of the parotid glands with scarlatina. I was called to see a gentleman last week at a large school, who had scarlatina; and since he has had this complaint, a number of the boys have had mumps—a swelling of the parotid glands. I have seen another case, where two children were ill, one with scarlatina, and the other with a swelling of the parotid glands, immediately succeeding the fever. As this occurrence is not very common, I am inclined to think that there is, as I have said, a mixture of the diseases, so that scarlatina is more likely to be followed by a swelling of the glands than in an ordinary epidemic. Our patient has got quite well of this, but I still fear lest dropsy should come on.

This leads me to say a few words upon the effusion which takes place in this affection. It is remarkable that in Dr. Fothergill's work on Angina Maligna, the disease which attracted so much attention in 1747, no one case is stated to have terminated in dropsy. In every case which I have seen of dropsy after scarlatina, the latter has been mild. A case occurred in this hospital some years ago, of a woman who had a still milder case than the present. She had been well of the complaint more than a week, and was merely kept in as a matter of precaution. Sudden effusion took place into the brain; she was bled; a blister was put on the top of the head, and kept open by mercurial ointment, calomel and diuretics being given at the same time. She was treated briskly antiphlogistically, and recovered. The effusions which succeed scarlatina are generally more troublesome than those which occur in ordinary diseases, or are the result of other affections. I saw some years ago, the case of a child in Regent's Park with scarlatina. The case was mild, and the child recovered. There were two other children, and they were sent into the country, and the house painted from top to bottom. At the expiration of two months they returned, and ten days afterwards, which is about the period of the disease lying dormant, they both took the complaint. One of them was five years old. The case was mild, and the eruption passed off. Suddenly, on the eighteenth day, dropsy came on, and there was anasarca, to a greater extent than I ever saw it in any other individual. The eyes were perfectly closed, and I should compare it to a blown-up pillow-case: there was no appearance of a child. This shews that it is no trifle where it does occur; but happily, from the treatment pursued, dropsy does not very frequently appear. Writers have laid too little stress on this subject. The best description of dropsy supervening on scarlet fever was in a work published by Plenciz, a German physician; and this was afterwards improved by Dr. Wells, in a paper published in the Transactions of a society for the Improvement of Medical and Surgical Knowledge. I recommend you to read that paper.

It not unfrequently happens that effusion takes place into the brain, sometimes

into the belly, but most frequently into the cellular membrane, and thus causes anasarca.

A great many questions have arisen as to how this particular complaint is to be treated when it succeeds an eruptive disease. It is supposed that it is the result of debility, and some assert that more die of this than of the original complaint. Some think that it has become less fatal in consequence of less stimulants being employed; and most modern writers agree on this point. Purging has been frequently employed in the course of the complaint, and even venesection under some circumstances. I am of the same opinion. I have never seen a case in which stimulation has succeeded. Where the inflammatory symptoms run high, and there is great heat of skin, the best plan is, if the child be not broken down, to take blood from the arm, and subsequently to use those diuretic medicines which act strongly on the bowels—saline medicines, with mercury. If the disease has actually become established, and the child is weakly, recourse may be had to some of those medicines which act on the kidneys: pyrola umbellata, joined with saline medicines, appears to be the most beneficial. I have seen the exhibition of liquor potassæ followed with great success in cases where the urine was much loaded: a tea-spoonful may be given three or four times a day, in milk; in general it has produced diuresis. The administration of bitters, with diuretics—such as an infusion of gentian and of digitalis—is a favourable mode of proceeding in some cases. The Germans are of opinion that an infusion of broom-tops is better adapted to this form of disease. I believe, however, that dropsy rarely takes place where the patient has been properly purged. In Dr. Hamilton's work on Purgative Medicines, you will find an account of an epidemic scarlet fever which raged at Edinburgh in his time; and in that epidemic, after the boys had appeared to recover for two or three days, effusion took place into the different cavities of the body. This led him to be careful in examining the reason, and he found that by purging freely as soon as the patients became convalescent, no other cases occurred during the whole progress of the epidemic. Foreigners, particularly the French and Italians, never think of employing cold affusion. When a patient has scarlet fever, he is shut up in a room, and ordered to be kept in that state forty days: not an atom of air is allowed to enter; and if the patient then has no anasarca, he is considered to be safe. It is almost like treating a person after the plague. Many years ago, I attended two children in Italy labouring under scarlet fever. I ordered the windows to be left open, and cold water applied, in the month of November. The effect was astonishing to some medical men. The patients recovered perfectly, and no unfavourable symptoms took place. In fact, dropsy, I believe, will not occur where the inflammatory symptoms of the disease have been treated during the complaint. Besides, there is another consideration. Almost all eruptive diseases, if left to themselves, terminate by diarrhœa; and if this is kept up by medicine towards the end of the complaint, all goes well. But if patients are not purged, and diarrhœa does not come on, then it is reasonable to imagine that the vessels will pour out fluid into the different cavities of the body. You are therefore to attend throughout the whole course of scarlatina to keeping the bowels freely open; and where the inflammation runs high, it is to be treated like any other inflammatory disease. The severe form of the disease, although not common, is an inflammatory disease, and is not followed by those sequelæ which occur in the milder form of the complaint.

But there are cases of scarlatina in which it becomes necessary to stimulate the patient from the very beginning of the disease, and in which absolutely there appears to be no inflammatory condition, The patient is taken very ill, and an ulcer forms on one or both tonsils, which is ash-coloured, and the breath is so offensive that you cannot bear to approach him. The inflammation creeps down the windpipe, and the patient dies. At other times the inflammation is of so fatal a character, that the nervous system becomes affected sympathetically, and in that way the patient dies,—just as a malignant disease at a distance produces death under other circumstances. You are to bear in mind, that the mild form of the disease in one patient may produce a severe kind in another. Some years ago, I was called to see a child, over Westminster Bridge: it was then at the breast, and laboured under scarlet fever. Nothing could be more mild than the complaint. There was a little efflorescence, and a little difficulty in sucking, but it soon passed off. Eight or ten days afterwards, the mother was attacked with rigors; vomiting and headache came on; and this was followed by great prostration of strength. A purple eruption came out on the legs, and she was much depressed. The throat was dreadfully ulcerated, so that the mouth could scarcely be opened, and the smell was hardly supportable. The patient was ordered three or four grains of sulph.

quinine, dissolved in as little water as possible, on account of the difficulty of swallowing, to be taken every three or four hours, and as much wine as could be got down: indeed she could not have swallowed a great quantity. The woman was by this means raised up from her state of depression, and eventually recovered. I have no doubt that such cases may occasionally occur. Ammonia has been recommended under these circumstances, but the difficulty is to administer it. There is no question but that though scarlatina is an inflammatory disease, yet cases do occur where there is no inflammation, and the impression on the nervous system is so violent, that, if stimulants be not applied, the patient will die during the progress of the complaint. Cases, however, sometimes recover very rapidly. The nurse to whom I alluded presented one of the worst cases I ever saw. A considerable quantity of quinine and wine was given, which cured the complaint; erysipelas then came on; the same remedy was used for the second disease, and the patient recovered.

With regard to the contagious nature of scarlatina, I apprehend there can be no sort of doubt on that question. You will frequently be consulted on this subject, and it is a matter of great importance to know how to reply. It is believed in the profession (and I entertain the same opinion), that a patient labouring under scarlatina, however modified, may spread the disease to another person at any time within a month from the period of attack. Consequently a boy should not be returned to school, or placed with other children, till that period has elapsed. You will remember the cases which I mentioned at Regent's Park, where the children were sent away, and the house painted throughout, and yet, upon their return, in ten days both the children had the disease. In the great majority of instances this will not take place: the children might be returned, and no one would imbibe the disease; but in some instances they would, and you are called upon to guard against such a circumstance in every possible way. You should not advise the child to be returned to the society of other children until a month has elapsed from the commencement of the complaint.

PURPURA.

There is a case in the house of what is termed *purpura*. The patient was with us before; he was relieved, and went out, but has returned. The case is in progress, but the patient is very ill. I shall speak of it at our next meeting, and state the reasons which induced me to employ the practice I adopted.

GOUT.

One of the gouty patients has had a slight return of the affection, but, upon the whole, the case is doing well. The two other patients are ready to go out whenever I think proper. I have no doubt that the slight return will be removed by the same means as before.

EPILEPSY.

I spoke, in a former lecture, of two cases of epilepsy: one case was attributed to a fall, and a seton was placed in the neck. Since that time the patient has had one fit, but it is now several weeks since, and he is going to be dismissed. The other is the case of the boy who has epilepsy once a month. We have verified this by the case; because I kept him in, that we might see he was not deceiving us. I put him on arsenic, and increased the dose to six drops of the arsenical mixture three times a day, as he approached the period when he expected to have a fit. Whether it will come on, I cannot say; but the charm is destroyed, for the period has passed by two or three days, and consequently we may hope that the chain of action is broken which coastituted the disease. I mentioned that the best way would be to put him on arsenic, and so far as the case has gone it appears to be successful.

ST. GEORGE'S HOSPITAL.

Case of Poisoning with Hydrochloric Acid.

Joseph Goodman, æt. 25, cabman at Chelsea, admitted, under the care of Dr. Chambers, October 31st. Pulse 58, small; skin warm; tongue much excoriated, dry.

He was reported to have taken about ℥ij. of hydrochloric acid nearly two hours before he was admitted into the hospital. He had vomited some dark greenish matter, which effervesced with carbonate of soda. About ℥iij. of this were then administered to him, with mucilaginous drinks and linseed tea. He did not himself think that he had actually swallowed much of the acid.

℞ Magn. Ustæ, gr. xv.; Mucil. Acaciæ, ℥iss.; Aq. Distill. ℥x. 4tis horis.
Enema emolliens, 6tis horis.
Hirud. xviij. gutturi et postea. Cataplasma Lini. Fotus abomini. Fever diet.

He vomited once or twice in the course of the night some dark matter.

November 1st.—Pulse 180, rather sharp; bowels not open; tongue dry; complains

of much soreness about the throat and fauees.

V. S. ad ℥xviij. Enema Ol. Ricini. Vespere repetantur Hirud. xx. gutturi. Ol. Ricini, ℥iss. eras mane.

2d.—Symptoms somewhat relieved; throat less sore; no sickness; no pain in abdomen. Pt.

3d.—Pulse 85, rather sharp. Tongue healing, not so dry. Throat very sore.

℞ Deeoet. Cydoniæ, ℥iss. Mell. Boracis, ℥j. M. ft. Garg. sæpe utend. Hirudines xij. gutturi.

4th.—The siekness has returned, and he has vomited some dark-green matter. There is this morning some slight pain in epigastrium on pressure.

Hydr. Submur. gr. ij. ter die.

5th.—Sickness has rather abated, and there is scarcely any pain in the epigastrium. Throat less sore. Pt.

6th.—His tongue is much swollen, so that he ean hardly protrude it. He complains of his throat being very sore, with pain extending downwards to the left side of his chest. There is a slight erysipelatous appearanee on the nose.

V. S. ad ℥xij. H. Salinus c. V. Ant. Tart. ℥ss. c. singulis Pilulis sumend.

7th.—Pulse full, soft, frequent, regular. Tongue mueh swollen and dry; has great difficulty in swallowing. There is much pain in the left side of the ehest, with some palpitation and giddiness. There is strong action of the heart, but without bruit. He had some shivering this morning. The pateh of pale erysipelas on the nose had nearly disappeared, but has now returned. Blood drawn yesterday mueh inflamed.

C. C. reg. cordis ad ℥x. Decoet. Cydon. Aq. Rosæ aa. ℥iij. Mell. Boracis, ℥ss. Ft. Garg. Rep. Pil. et H. Salinus. Milk diet.

He fainted after the eupping, but soon afterwards rallied. In the evening he was seized with great difficulty of breathing, but without much pain either in the chest or epigastrium, and till the last complained only of his throat.

He died on the 8th, about 1½ A.M.

Post-mortem.—On opening the chest there was found in the right eavity of the pleura about Oss. of serous fluid, mixed with blood; and in the left about Oj. of the fluid, with shreds of lymph floating in it. There was some inflammation of the larynx, and this increased as it descended into the bronehial tubes. The left lung was much inflamed and condensed, and purulent matter exuded from the eut edges of the small branches of the bronchial tubes. In the pericardium there were about ℥ij. of fluid. The tongue was much inflamed and enlarged. The œsophagus was highly inflamed; and in some parts the mueous eoat had sloughed, and in others it was rather thiekened. The coats of the stomaeh were very highly inflamed, and in most parts had sloughed; and large dark shreds of the slough were hanging from its sides, especially about the pylorus. The inflammation had extended into the duodenum, but no sloughing had taken plaee there.

The liver, panereas, kidneys, and heart, were healthy.

ASSISTANT-SURGEONS IN THE NAVY.

MANNER IN WHICH THEY ARE TREATED.

To the Editor of the Medical Gazette.

Sir,

I think you eannot be aware of the manner in which medical affairs are conducted in the navy, or your attention would long ago have been directed to the subject. I am inclined to think so from the temperate and straightforward course you have always pursued—giving praise where praise is due, and never shrinking from the duty of exposing abuses where *real* abuses exist. It is with this sense of your impartiality that I am induced to bring before your notice, and that of the medical profession, facts whieh I fear have hitherto been kept too secret, and not proclaimed with that truth and publicity which their importanee demands. Whether this supineness results from the aggrieved party being absolutely so ashamed of their condition as to prefer privacy, or from other causes, I know not; but this is certain, that no proper means have yet been adopted to remove the grievance, either by the actual sufferers, or by any other parties.

The surgeons and assistant-surgeons of the navy both labour under great disadvantages, and are even now far behind their brethren of the army; but it is to the condition of the assistant-surgeon that I particularly wish to draw your attention, because it is the most glaring and most degraded. The state of the surgeons is tolerable, nay respectable, but that of their assistants is altogether degrading.

Those who enter the navy are for the most part young Scotch physicians, who, having finished their education, enter the

service with a false idea of its being a convenient place for study, and prosecuting practically their favourite sciences on foreign shores. But, alas! how many unfortunate young men, when too late, have discovered that these notions were preconceived and erroneous—that their hopes were merely the fictions of their own ardeney, and that they have, heedlessly and unadvised, taken a step totally inconsistent with their previous habits and education. Such a one, perhaps, has "interest" in the navy; he is young, and full of hope (not to mention dazzled by a fine uniform, which is very natural); he has a laudable desire of visiting distant shores, his previous education having taught him to behold them with a scientific eye; he is anxious to witness and to investigate the causes of natural phenomena, the productions of remote climates, both geological, zoological, and botanical: all these glowing inducements decide his doubting mind. He is consequently appointed to a ship; he is no sooner embarked than his troubles commence; he is conducted to the midshipman's berth, and learns that these boys are to be his future messmates and companions, together with a few petty officers, —as the coxswain, carpenter, &c.; he has to sleep in public!—it is a fact; he has no private cabin, though the carpenter and others have this convenience. To read is out of the question; if he attempt it, his books are torn and otherwise ill treated: indeed he seems to be singled out as an object of degradation and contempt.

Now what is the consequence of all this? Why look to the poor suffering officers themselves, and read the melancholy answer; see how necessity triumphs over education and all moral restraint—how they acquire the habits of their associates, and daily lose more and more of their previous acquirements, till at length they become unfit for promotion. The truth must be spoken, sir, however painful the intelligence may be; for the surest way of curing a malady is to ascertain its extent. I need scarcely observe how the evil extends beyond the actual sufferer—how it implicates the whole medical profession; for surely no insult can be offered, or degradation heaped upon any portion of a profession, without its being felt, in some shape or other, by the whole brotherhood. But it is not so much to the personal inconveniences that I allude (which, in truth, are bad enough), as to the impolicy, the cruelty, of placing these officers in a situation to which they are totally unsuited, both from the nature of their professions and the studious habits which they have, or ought to have. It is all very well for boys who are learning navigation and the duties of a naval officer; indeed, in such a case it is indispensable, for they must of necessity be separated from their superior officers, to keep up that distinction which a more intimate intercourse would destroy; for, as boys, they could not appreciate such intimacy without losing that *awe* which must exist between the two; —but with the assistant-surgeon it is quite otherwise; he has already gone through the drudgery of his own profession, and his sole object now should be to retain what he has acquired, and direct it in proper channels; and until suitable opportunities are afforded him to further these objects, the naval service will ever want that degree of medical skill which her peculiar circumstances demand. After duly considering this subject, I am convinced there is only one remedy for the evil, and until that be adopted there can be no hopes of improvement among this class of officers. He should be admitted into the gun-room, and to the society of its inmates; a claim to which he is entitled by all the rights of humanity and justice—a claim which the respectability of his own profession demands—a claim which science calls aloud to be satisfied; and I cannot but think that those who stand in the way of its adoption, are accumulating a heavy load of responsibility on their own heads; and, oh! could they but see, in one concentrated view, the dark train of evil consequences resulting from their apathy, I am sure they would relent, and give every aid to promote, rather than oppose, this measure.

I might advance many arguments in support of this claim, and particularly dwell on that which relates to the obstacles of scientific pursuit, and its consequences; but I know that your time is much occupied at this crisis of medical science, in turning aside the revolutionary flood which is setting in, and swelled too, by the efforts of her own members. We must acknowledge that you have a task which requires undivided attention; nevertheless, I entreat, in behalf of the unfortunate sons of that profession, who are now rolling on the sea under a tropical sun, that in the midst of your exertions you will not be unmindful of *their* sufferings; they are scattered far and wide on the bosom of the ocean, and therefore cannot come before you with clamorous complaint: their silence may be mistaken for contentment or resignation, but I fear it is the sullenness of wounded pride.

I remain, sir,

Your obedient servant,

W. M. B * * *.

November 24, 1836.

NERVES OF THE ORBIT.

NOTE FROM MR. SHAW.

To the Editor of the Medical Gazette.

SIR,

I AM unwilling your readers should think that, in noticing the error committed by Mr. Thurnam, I expressed myself in a manner calculated to warrant the belief that I was "wanting in good feeling." I should be very sorry if it were considered that I took advantage of this gentleman's having fallen into a mistake (of which, indeed, there could be no question), in order to make my observations more severe than his negligence really warranted, or that I was actuated by any improper feeling. Permit me to remark, that in deprecating my supposed want of good feeling, Mr. Thurnam forgets that, by his own carelessness, he had laid himself open to a worse charge than I brought against him, that of wilfully committing an act of injustice towards another. His last letter shews how his mistake originated; and I take this opportunity of saying, that if I had been aware that the early paper to which he referred did not contain the views relative to the sixth nerve, which have been the subject of our discussion, I should have given him the advantage of this circumstance, and have explained his error in such manner as not to have caused him the least pain.

I have the honour to be, sir,

Your obedient servant,

ALEXANDER SHAW.

Middlesex Hospital School,
Nov. 28, 1836.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

November 17, 1836.

John Kimnell, Leamington Spa.
George Carpenter, Chippenham, Wilts.
Nicholas Rundell, Callington, Cornwall.
George Augustus Harrison Capes, Castle Hedingham.
Maurice Searle Barton, Market Rosen, Lincolnshire.
Isaac Barnes Murcott.
Thomas Davies, Hookwood, Surrey.
Edward Hodges Cree, Bridport.

November 24th, 1836.

Samuel Hill, Southwark.
Charles Jones.
John Morris, Shucknall, Herefordshire.
Benjamin Ward, Leeds.
Jesse Henry Newington, Trieliurst, Sussex.
Thomas Cooley, Alfriston.
Thomas Bayley Mercer, Deal, Kent.

December 1st, 1836.

Gurney Turner, Yarmouth.
John James Ibbotson, Nafferton.
Thomas Parkin Atkinson, Kilham.
Cornelius Waddell, Colchester.
Charles Robert English, Bath.
John Challice, London.
Robert Nathaniel Stone, Bath.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 3, 1836.

Abscess	2	Hæmorrhage	1
Age and Debility	22	Heart, diseased	1
Apoplexy	7	Hernia	1
Asthma	13	Hooping Cough	3
Cancer	3	Inflammation	30
Childbirth	4	Bowels & Stomach	1
Consumption	48	Lungs and Pleura	4
Constipation of the Bowels	2	Insanity	1
Convulsions	22	Liver, diseased	3
Croup	3	Measles	12
Dentition or Teething	5	Mortification	3
Dropsy	13	Paralysis	3
Dropsy on the Brain	10	Small-pox	7
Dropsy on the Chest	1	Sore Throat and Quinsey	1
Epilepsy	2	Spasms	1
Erysipelas	1	Thrush	3
Fever	5	Unknown Causes	3
Fever, Scarlet	5		
Fever, Typhus	2	Casualties	10
Gout	1		

Decrease of Burials, as compared with the preceding week . . 49

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Nov. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 24	from 32	to 43	29·42	to 29·49
Friday . . 25	25	38	29·65	29 61
Saturday . 26	30	43	29 37	29·28
Sunday . . 27	38	55	29·54	29 44
Monday . . 28	51	57	29·25	29 33
Tuesday . . 29	49	57	29·04	29·42
Wednesday 30	42	48	29·42	29·62

Prevailing wind. S.W.

Generally cloudy, except the 24th, with frequent and heavy showers of rain.

On the 28th and 29th wind very boisterous, perhaps never more so than on the 29th, doing much damage to buildings and trees.

Rain fallen, 1 inch and ·05 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

WE cannot make our pages a vehicle for Mr. Guthrie's *circular* lecture: such communications we consider as mere advertisements.

"A PUPIL" is unreasonable in expecting us to publish his statement unauthenticated: we little doubt the facts—yet what warrant have we of their accuracy?

ERRATA.—In Dr. Ogston's paper, page 172, col. 1, line 21, *for* "1830," *read* "1831;" p. 175, col. 1, line 9, *for* "widowers," *read* "widows;" col. 1, line 11, *for* "widowers," *read* "widower;" col. 1, Table 1, opposite 1827, *for* "2," *read* "3;" col. 1, Table 2, opposite 1827, *for* "3," *read* "2;" col. 2, line 2, *for* "average," *read* "increase;" p. 176, col. 2, line 45, *for* "hard," *read* "soft."

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 10, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XI.

Further remarks on the Evidence of Rape—Violation without defloration—Appearances in prostitutes—Possibility of the proofs in married women—Miscellaneous considerations—Ages of the parties—Violation of infant children—Evidence from certain discharges—Distinctive characters of menstrual fluid—Pregnancy in reference to rape—Question of consent—Sham cases—Practical rules for investigating cases of rape—Report in illustration.

In the last lecture I treated of some of the chief circumstances connected with rape—a subject of high importance in Forensic medicine; as will readily be admitted, when we take into consideration the frequency of the charge, the difficulty of the proofs, and the doom that awaits the convict.

General evidence in cases of rape.—"The accusation," says Lord Hale, "is easy to be made, and harder to be proved; but it is harder to be defended by the party accused, though innocent." And in another part of the "Pleas of the Crown," this learned Judge notices particularly the precariousness of the evidence of the crime: it presents, he says, "the greatest difficulty; wherein many times persons are really guilty, yet such an evidence as is satisfactory to prove it can hardly be found; and on the other side, persons really innocent may be entangled under such presumptions, that many times carry great probabilities of guilt."

In cases of this kind the primary evidence is generally given by the complainant herself; her single testimony is adduced in proof of the fact, and she is held to be a competent witness, (even the wife against the husband—as in Lady Castlehaven's case, 3. State trials, 411) provided certain moral circumstances concur to attest her credibility. She must be a person of good character, must have denounced the offender without loss of time, and be able to show that she made all possible resistance. But, on the other hand, it deserves to be noticed, that even though she be of bad character, and have concealed the injury for some time after she had an opportunity of revealing it, and although it does not appear that she made any outcry at the commission of the offence, still her testimony is not to be wholly rejected.

Medical evidence.—Among the collateral facts, proof of which is requisite to support the general accusation, marks of violence on the person, and especially about the sexual organs, must be clearly made out. The circumstances should be very peculiar, indeed, to justify a conviction for this crime, without any appearances indicative of violence being detected about the complainant's person. Hence the necessity of medico-legal interference.

I have already observed that the crime of rape is usually distinguished by the medico-legal authorities, (the legal make no such distinction) according as it is committed on those who have had, and those who have not had, sexual intercourse before. Consistently with this arrangement, I noticed in last lecture the signs of forcible deprivation of virginity; and it remains to offer some remarks on the proofs of rape that may be looked for in other females than those who have been recently virgins.

Violation without defloration.—The common impression is, that if it be difficult to detect the fact of violated chastity in the

young and unmarried, it is infinitely more so—more truly like exploring "the way of a serpent on a rock," when the person to be examined is differently situated. We should recollect, however, that by far the greater number of alleged rapes are attended with brutal violence; and if we may credit some excellent authorities, the difference between the used and the unused is not generally so great as to make a material alteration in the indicia of sexual injury, especially if it have been excessive.

Even in the case of prostitutes it does not appear that the difference is very observable. I shall here make an extract or two from Parent-Duchatelet's volumes, (*De la Prostitution dans la ville de Paris*) already quoted, a work which abounds with facts the most extraordinary—at the same time, I believe, the most authentic. "If there be one opinion more generally received than another, it is that the genital parts of prostitutes *must* present appearances and alterations inseparably connected with their occupation: it is the common talk of libertines, high and low, young and old, and a standing joke when any of the associates of the latter happen to marry women who had formerly been on the town. I have even found medical men themselves more tinctured with the popular notion on this head, than the common orders of society. * * * * In order to obtain exact information, I applied to all the most likely sources—to the dispensary physicians and surgeons, to those attached to the hospital of the police, to the prison infirmaries, and, in fact, I allowed no opportunity to escape me. The results are precious, and shall be concisely stated.

"There is *no* special or peculiar change observable in the sexual parts of prostitutes; no difference, indeed, between them and the most respectable married females. The frequent use of the speculum, and the other methods employed in examining women of the town who apply at the dispensaries, as well as those leaving the hospitals and prisons, have convinced the medical inspectors that largeness and smallness of the vagina are merely natural and congenital conditions, no more remarkable than the disproportion which is commonly met with in individuals as to the size of other parts of the body. Young prostitutes are frequently met with just commencing their trade, and who have never been with child, yet having the vagina more dilated than is found in married women who have had five or six accouchments; while on the other hand, we may observe women who have been on the town for twelve or fourteen years, nay, who have decrepitude stamped upon them, yet whose sexual parts, and particularly the vagina, exhibit no trace of alteration. There was a woman pointed out to me one day in the prison of the Madelonnettes; she was 51 years of age, and had been for *fifteen* years a prostitute in the metropolis; notwithstanding this, her sexual parts might have been confounded with those of a virgin at puberty."

Appearances in married women. — The statement of these facts is most important as regards the possible proofs of rape in married women, or those who have avowedly had previous sexual intercourse. With the exception of absence of the hymen, it is possible that such women may have had, anterior to the violence offered them, all the appearances of uninjured chastity, and consequently whatever marks of violence of a *recent* nature are present, may reasonably be attributed to the alleged outrage. It is an unreasonable as well as an uncharitable doctrine to hold, as some do, that appearances of this kind in married complainants must be looked on with suspicion, as indicating that methods had been taken to produce aggravated lesions, by way of having a stronger *corpus delicti*. Why may not the marks of brutality be observable in such women, as well as in others — especially if we admit the correctness of the remarks of Parent-Duchatelet and his informants? And is not the contrary persuasion founded in that very vulgar error which these authorities have exposed?

Great caution undoubtedly ought to be observed in gathering the proofs in such cases; but so ought it in every case, whether relative to the unmarried or the married. Some have suggested that *more* evidence of proof should be required in respect to the married than the other; and it has been even proposed that, however the fact of penetration may be deemed sufficient in the latter case, proof of *emission* should always be insisted on when a woman who has avowedly had previous connexion is the complainant. I cannot help thinking that this suggestion is founded in bad physiology; for it assumes a position for which there is not sufficient warrant, that women are always sensible of the occurrence when emission during the generative act takes place. And if this be so when there is no mental disturbance, how unreasonable to expect that a female should attend to such an event when she is made the victim of outrageous and brutal assault! To demand proof of emission from the married, is as unjust and as absurd as to require rupture of the hymen in proof of penetration in the unmarried; for in both instances what is this else than to "contend that more is necessary to constitute rape in law than generation in nature?" For without either perception of

emission, or penetration into the vagina, impregnation may be effected; as in fact the same learned authority I have just quoted says, "the utmost wrong to one party, and the malignant intent of the other, may have been complete; while injury on the one hand, and malice on the other, are truer criteria for administering justice than the dicta of lawyers, and the etymologies of schoolmen."

I have dwelt upon these points chiefly with a view to remove those impressions which are prevalent, more particularly if *you* should happen to entertain them, that there is little or no use in examining the persons of females complaining of rape who have had previous intercourse. With ordinary caution, it may be done, I think, with more confidence than is usually supposed; and although we shall find no laceration of the hymen, yet the other signs may in great measure be expected to be present: we may find bruises, red spots, and excoriations of the sexual parts, such as would be produced by the introduction of a foreign body; a sort of mucus may be detected about the parts, which may prove to be seminal fluid; and, lastly, ecchymoses or other marks of injury may be observed on different parts of the body. When such appearances are seen, the probability of the alleged violence must be considered strong; and the presumption will be admitted to be greatly strengthened when it is borne out by moral and collateral circumstances, such as have been already alluded to—namely, the timeliness of the complaint, the solitariness of the *locus in quo*, with the impossibility of obtaining assistance there,—and, lastly, the general demeanour and conduct of the woman.

Miscellaneous Considerations.

Age of the parties.—The present law of rape seems to be of dubious application in other respects beside those already noticed. I mentioned in the lecture on Age, that boys under *fourteen* are presumed, in law, to be incapable of the crime of rape, evidently with the idea that emission is essential to the act. But by the late statute making the essence of rape consist in penetration merely, the commission of the crime, wholly independent of the hypothesis of precocious puberty, is obviously within the powers of very youthful delinquents. Mr. Chitty notices this circumstance, and seems to think that some alteration of the law would be expedient: "perhaps a different rule might without impropriety be adopted, so as to include offenders of an earlier age than fourteen (who are between that age and seven, legally capable of committing *other* crimes). Yet," he adds, "as the law has once fixed that age as the earliest time when the ability to commit a sexual crime is to be considered as established, it is most probable that the rule would be still adhered to, although one of the reasons for its adoption has ceased."

With respect to female infants, the law is strict in yielding them protection under certain ages; they are presumed to be incapable of giving consent under *twelve*, and it is a capital felony, under any circumstances, to have carnal knowledge of a child under ten. The act formerly referred to (9 Geo. IV. c. 31) says in the 17th section,—"that if any person shall unlawfully and carnally know and abuse any girl under the age of ten years, every such offender shall be guilty of felony, and being convicted thereof, shall suffer death as a felon; and if any person shall unlawfully and carnally know and abuse any girl, being above the age of ten years and under the age of twelve years, every such offender shall be guilty of a misdemeanor, and being convicted thereof, shall be liable to be imprisoned, with or without hard labour, in the common gaol or house of correction, for such time as the court shall award."

Yet cases of this criminal nature are not infrequent. Scoundrels, particularly in low life, entertain an idea that the remains of a venereal affection, such as gonorrhœal discharge or gleet, may be got rid of by a sexual intercourse with a healthy female; and an infant under the age mentioned in the act is preferred, as not likely to offer much resistance. The following are instances of this infatuated guilt, and they may serve to shew how the law deals with such malefactors.

At the Norwich Spring Assizes this year (1836), Robert Bunting was indicted for a rape committed on Phœbe Taffs, a child only four years and a half old. The case, it appears, was *fully proved*, but the evidence was deemed unfit for publication. The child died of the injuries received from the violence of the prisoner. The prisoner was sentenced to death, without hope of respite.

In June last, a man of the name of Kinsey was tried at the Old Bailey, for violating the person of a girl under nine years of age. He was found guilty, and sentenced to death; but has since been transported for life. According to the brief report of this case which I have seen, the child did not complain until six weeks or two months after the "outrageous" act (as the Recorder termed it); yet the surgeon who gave evidence was able, from inspection of the infant's person, to speak positively as to the commission of the

crime. This would seem to warrant the supposition that gonorrhœa or venereal disease was communicated to the child, which led to the detection of the prisoner's guilt; and probably the injury done to the sexual parts might have been sufficiently serious to leave its traces even after that lapse of time.

Discharges. (*a.*) *Supposed venereal.*—When violation is effected with the notion of getting rid of some venereal complaint, it is very probable the malady may be communicated to the victim. But great caution must be observed in judging of this fact: the nature of the discharge, if there be one present in the complainant, must be carefully ascertained, the appearances of violence on the surrounding parts must be noted, and the time should form a material element in our estimation of the probability that the disease originated in the manner alleged. Some well authenticated cases are on record, which should serve to warn us of the mischief that may be done, if the true state of the complainant be not deliberately and wisely investigated. Dr. Percival mentions a remarkable case of a little girl, only four years old, who was attacked with mortification of the sexual parts, attended with great soreness and general depression of strength. She had slept with a boy of fourteen, and it was suspected that he had taken criminal liberties with her. The mortification increased, and the child died. The boy was presently apprehended, and tried at the Lancaster Assizes; but was acquitted on evidence being given that several instances of a similar disease had appeared in other children, about the same time, in which there was no possibility of injury or guilt. In one of these cases the body was opened after death. The disorder had been a typhus fever, accompanied with mortification of the pudenda. There was no evident cause of this extraordinary symptom discoverable on inspection: the lumbar glands were dark-coloured, but all the viscera were sound.

Capuron relates a case almost identical, in which he had the utmost difficulty in convincing the parents of a little girl, only four years old, that they were in error. The child had great swelling of the sexual parts, with pain and purulent discharge; and it was attributed by the father and mother to some impure venereal contact or violation. But the medical examiner shewed them that a similar catarrhal affection of the sexual organs prevailed epidemically about this time; and by the use of some simple remedies the child was cured.

The same authority mentions his having met with a case in the year 1809, where the presence of a most acute leucorrhœa, in a child of six, would certainly have persuaded the parents that it originated from a venereal commerce, had they not been more reasonable than in the preceding instance. It was nothing more than a catarrhal disorder of the uterine system, proceeding from the cold and moisture of the weather, and owing in great measure to the want of sufficiently warm clothing on the little patient.

Venereal in reference to rape.—It has happened in some instances that, after an alleged violation, the complainant describes herself as infected with gonorrhœal discharge, or chancre; and this has been found to be the case. But how does the fact of communicated venereal bear on the charge of rape? We must recollect what time usually elapses after an impure connexion, before chancre or gonorrhœa is perceived. Three days may be about the average period; and it will be for the medical examiner to form an opinion, from the appearances, how long the complainant may be actually labouring under the disease. Above all, he must be perfectly satisfied that it really *is* venereal. Now suppose a woman with incipient gonorrhœa or chancre to bring a charge of rape against a particular person; it will readily be seen that the case cannot be very recent, nor should the marks of violence about the sexual organs be expected to be very striking, if, indeed, they should be at all visible. On the whole, the presence of venereal in the complainant can scarcely be considered as an accessory proof of rape, unless it coincide in every respect with the other lesions observable on the sexual parts; and unless the accused party labour under similar venereal disease.

(*b.*) *Supposed semen.*—A gross error committed by a medico-legal examiner has been pointed out with strong censure by M. Orfila. The examiner in question was called to inspect the person of a girl, under the age of fourteen, who was said to have been violated *nine days* previously: he considered the appearances conclusive that copulation had been effected, and one of his proofs was, that he found a quantity of *semen* in the vagina! Orfila, who was consulted subsequently on the correctness of the report, shewed that this statement of the discovery of seminal fluid was most improbable. The girl, it appears, had a mucous discharge from the part, which must have carried away any sperm that might possibly have been deposited in the vagina *nine* days before. At all events, the broad assertion that the fluid found was semen, was wholly unwarrantable; for it does not appear that any attempt was made to shew that it was not

mucus: no chemical, no microscopical experiment was tried; and on the whole, did it not appear that the examiner was not aware of the serious nature of his statement, so rash an opinion would have justly cost him his professional reputation.

(c.) *Menstrual discharge.* — Great stress is sometimes laid on the discharge of blood said to take place in consequence of forcible defloration. But there is nothing in this positively indicative of the defloration being forcible; it may occur in a first or other intercourse, even with consent. Besides, we should distinguish, if possible, between an alleged hæmorrhage and the menses. In the former case there should be evidence of laceration of the hymen or nymphæ, or rupture of some of the vessels belonging to the genital organs. In the latter we may be guided by circumstances, as well as by the physical characters of the menstrual discharge. If there be no apparent rupture of parts, and the fluid be traced high up into the vagina, there is a probability that it is the menstrual flux proceeding from the uterine vessels—a presumption which will be corroborated by the distinctive appearances of that fluid.

The menstrual flux, though it has been traced to the vessels of the uterus, has hardly any common property with blood, except that of being a liquid of a red colour. It is chiefly distinguished by its not being coagulable; and hence, when coagula are found in it, as in laborious or profuse menstruation, blood is certainly intermixed. "It is," according to John Hunter, "neither similar to blood taken from the vein of the same person, nor to that which is extravasated by accident in any other part of the body; but is a species of blood changed, separated, or thrown off from the common mass, by an action of the vessels of the uterus similar to that of secretion; by which action the blood loses the principle of coagulation, and, I suppose, life." Other observers have since confirmed these views, by finding that the menstruous fluid differs from blood chiefly in containing little or no fibrine. And another character, in addition to its non-coagulability, has been attributed to it—namely, that it is not acted on by exposure to the air, as venous blood is, which it chiefly resembles. "If a cloth be steeped in blood as it flows from a vein, the colour will be observed to become brighter by degrees: but this is not the case with the menstruous fluid; it retains its dark colour however long exposed*."

But it must be confessed that we are still in want of a good analysis of the menstrual fluid. The only account of its chemical qualities which I have been able to meet with is that given by Gmelin, in his *Handbuch der Chemie*, consisting of two cases which he takes from other journals. In a woman who had prolapsus uteri, the menses were examined: they contained no globules, were green by transmitted light, and resembled a strong solution of the colouring matter of the blood in serum.

In the other case, where the fluid had been retained for some time by an occlusion of the vagina, it appeared as a thick, glutinous, brown-red syrup, without any smell; three days' exposure to the air produced no change in it; there was no deposit (or coagulum), nor any approach to putrefaction; it was liquified by potash, and thickened by sulphuric acid and alcohol; water, in which it was immersed, took very little of its colour, but subsequently became clouded in evaporation, and as if coagulated on the addition of alcohol.

Pregnancy in reference to rape.—It was at one time a matter of great importance to ascertain whether a woman who complained of rape would prove with child: if she did, it was assumed that she must have given consent, and her charge of violation fell to the ground. It was even customary to stay the execution of the convicted ravisher until the question of pregnancy was determined. But a more sound physiology has dissipated this error; and it has long since been ascertained, that, so far from consent being essential to conception, complete insensibility—nay, agony, hatred, and the most violent struggles of resistance — are not inconsistent with a fecundating act of copulation. Of this, however, more hereafter.

Question of Consent. — The point just touched upon, respecting the consent of the female, is one that requires further notice. The legal definition of rape—carnal knowledge forcibly and against the will—sufficiently indicates that this circumstance in the crime must be clearly made out, and, in ninety-nine cases out of a hundred, the question of *consent* constitutes the chief difficulty. There is, indeed, one case in which a rape may obviously be committed without resistance, and apparently *with* consent: that is, where a violator takes the husband's place, and thus accomplishes his purpose. The crime, however, is not altered in its nature by the deception; for it is inferred that the woman, had she known the vile fraud, would have resisted with all her powers.

Again, there may be no resistance, yet a rape,—where the female is under the influence of some narcotic or intoxicating

* Ramsbotham; MEDICAL GAZETTE, vol. xiii. p. 271.

beverage. Forcible defloration might be, and has been, effected under such circumstances, and a case of the kind excited much public disgust about three years ago, —a Mr. Luke Dillon having seduced from her home and violated a young lady, whom he first brought under the influence of intoxication. But when it is alleged that the crime has been committed in *deep sleep*, the fact is scarcely credible except the female be one who has been accustomed to sexual intercourse. Of the possibility of defloration in profound sleep, we must be permitted to entertain doubts, notwithstanding the decision of the learned Faculty of Leipzig, which held—"dormientem in sella virginem insciam deflorari posse;" nor can one help suspecting, with Valentin, that it must be a fox's sleep: he shrewdly observes, in his Introduction, in reference to the case, that it reminds him of an old German proverb (Es schlaffen nicht alle, so die augen zu haben)—"all are not asleep who have their eyes closed."

The term *forcible* defloration is commonly employed in the sense of rape, but that is not its exact import: a defloration may be forcible (and it is said that every defloration is more or less so), yet it may not amount to criminal violation. That an extraordinary degree of force may not be inconsistent with consent, we learn from a very shocking fact mentioned by Dr. Evory Kennedy, in the Dublin Journal, of the whole vesico-vaginal septum being broken down, in a first connubial intercourse!

Sham cases.—Much may be ascertained by the medical jurist, in regard to the question of consent or non-consent. It is in this that the detection of sham cases consists; of which, according to Mr. Amos, there are probably a dozen or more met with on circuit, for every genuine case that comes to be investigated.

By noting the physical powers and moral nature of the complainant, much light may be thrown on the facts. At the Derby spring assizes this year, a lad of the name of Dolman, aged 17, was capitally indicted for a rape on Sarah Baxter, aged 21. The complainant proved to be a coarse woman of loose character, who, as appeared from the evidence, *seduced* the prisoner to the act of sexual intercourse, on a public bridle-road. The prisoner was acquitted. On his cross-examination, the surgeon who had inspected the person of the female, and appeared as a witness, deposed, that "he was of opinion, as a medical man, that the woman's statement, that she had not been intimate with more than one man before, was untrue."

Some authorities go so far as to hold that no violation can ever take place without some consent on the part of the female; she having it generally in her power to foil her assailant. "It is beyond a doubt," says Orfila, "that it has been found impossible to violate certain girls, though their arms, their legs, and their heads, were held by three or four persons; and it is well known," he adds, "how difficult is a first act of intercourse, if the female demurs." Then comes the old story of the Queen of Navarre and the unsheathed sword. But surely the inference is too positive; a woman with strength of body and presence of mind, has a great deal in her power, no doubt; but if, overpowered with terror and violence, she sink into syncope—if she be labouring under the effect of narcotics, or be made senseless by intoxication, the case is altered; and certainly, as the annals of crime but too well testify, a female may be beset by such a number of savage ruffians as would render all her efforts at resistance fruitless.

Where there is an obvious contrast in the physical powers of the complainant and the accused—the former being a robust strong young woman, and the latter, suppose, an elderly and perhaps a debilitated person—the charge should be admitted with great caution. There is an old epigram, in Bayle, on the subject, which I should quote, but that it is in such antique doggrel rhyme. It supposes the question put to a vigorous young complainant, as to how she could swear that her alleged violator—a feeble old man—had effected his purpose in spite of her efforts. Her reply is, that on any other occasion she could sufficiently protect herself, but that she could not on this, for it was really impossible,—she laughed so much!

An anecdote told by an old French author, in a Treatise on Crimes—the same, in fact, on which Cervantes founded his celebrated judgment given by Sancho in the Island—serves very well to shew the extreme difficulty of violation, when the parties are pretty fairly matched. A young man who was condemned for rape was sentenced to forfeit a purse of money; and he was ordered to hand it over to the complainant in open court. On leaving the dock, however, he was permitted to follow the woman, and recover his purse if he could: he soon found that this was impossible, so violent was her resistance. The woman returned, and complained to the judges; but they, being of opinion that one who could so well guard her money might have as easily protected her virtue in the alleged rape, ordered her to give up the purse.

An attention to the moral circumstances will often settle the question of consent. Mr. Amos cites a case which was tried at Leicester, in which a bailiff was charged

with the capital offence of violating a young woman, in a house where he was stationed as a keeper. The girl was the daughter of the owner of the house, and it came out that the alleged rape was committed early in the night, in the very next room to that in which her father and mother slept. Upon being asked if she screamed, she answered, "No."—"Why not?" "For fear of waking my mother!" In another case which was tried at Derby, the woman was quite positive as to the length of time during which the occurrence was happening. It was ten minutes.—"Are you sure?" "Positive."—"How do you know?" Witness hesitated; question repeated. "I counted."—"How did you count?" "One, two, three, four, &c." —"Did you count sixty, ten times over?" "Yes!"

Even when there has been evidence of screams and resistance, doubts fatal to the issue of the case have been raised, as to the sufficiency of such resistance. "In one instance, in particular," says Mr. Amos, "I recollect the screams of the girl being proved by several witnesses. But she had, in some measure, brought the mischief on herself, by walking with the accused in a solitary place late in the evening; and what had considerable weight with the jury, was, that as soon as the man had accomplished his purpose, the girl said to him, 'Oh, George, there is nothing like a good conscience and a pious life!'"

Practical Suggestions.

I shall conclude this part of my subject by laying before you some rules of conduct which may be serviceable in the investigation of rape cases.

1. Take a note of the *time* when you are called in to make a personal inspection; for this may be of great importance in determining the nature of the charge—especially if it should appear that there had been any suspicious delay. And lose not a moment in proceeding to the inspection; for the evidence founded on the appearances will greatly depend on the timeliness of the visit. Furthermore, one of the first memoranda to be taken in investigating the case, is the time at which the alleged violation occurred.

2. Observe the age and general *habit of body* of the complainant. Examine the person cursorily, with reference to alleged bruises, wounds, or lesions, of whatever kind. These are afterwards to be more particularly considered with regard to the mode in which they are stated to have been inflicted.

3. Proceed to examine the *sexual parts*, with special regard to the question of penetration. Notice the general form and disposition of the parts; observe any swelling, inflammation, or discharge about them; laceration of the hymen, if there be appearances of it: state of the caruncule myrtiformes; and any contusions or marks of violence about the labia, or in their vicinity.

4. Compare the *general* and *particular lesions* with reference to the probable date and cause of their origin. We must make allowance for the period elapsed since the occurrence of the injury, and take into consideration the constitutional peculiarities of the complainant. Was it during the menstrual period that violation took place? or did she labour under any debilitating or relaxing discharge? In such cases there should be less sign of penetration expected to be present than in others; and consequently it may be more difficult to affirm the fact. On the other hand, mark well whether there may not be *too much* proof forthcoming: whether some of the appearances do not seem exaggerated, or different from what might be produced by the male organ. Recollect that other foreign bodies may have been introduced into the parts, and that pains may have been taken to aggravate what was probably at first only a very inconsiderable, if any, injury.

5. Let such *discharges* as may be present be well observed,—whether they be the result of recent inflammation — of leucorrhœa—of gonorrhœa, &c.: and above all, if called in speedily after the alleged violation, seek for seminal fluid in the vagina, as well as for seminal spots and stains on the woman's garments. These are to be tested by their physical, chemical, and possibly also by their microscopic characters: should such tests be successful, they afford a high degree of probability in corroboration of the fact of penetration by the male organ.

6. Should the individual have died in consequence of sexual violence, her body should be examined most scrupulously: lesions may possibly be detected on the surface; there may be fractures, luxations, substances found in the mouth (introduced perhaps to prevent the deceased from calling for assistance)—all sorts of indications, in short, of recent and violent rape. It is possible, on the other hand, that the post-mortem may lead to an opposite conclusion—that death has rather resulted from some other cause: that the deceased had not been *recently* deflowered —perhaps that she had been a mother.

7. Lastly, examine, if possible, the person of the *accused;* for though we may not be enabled to affirm that the individual whom we inspect has committed the crime, it may be in our power from such inspection to say that he has not. We may find him destitute of the means of effecting penetration, or his structure of parts may be such as to render it highly im-

probable he should have perpetrated the amount of injury alleged. Besides, the inspection of the accused party may throw light on the circumstances in another way: in the case of alleged rapes on infants, it will be important to ascertain whether the accused be not infected with gonorrhœa or syphilis, which would certainly in some degree strengthen the presumption of his guilt. And further: there may be bruises and scratches on his person, denoting the resistance of the woman; there may be spots and stains on his linen also corresponding with those observed about the female. All these points, and many more which will in practice be suggested by the circumstances of each case, deserve your best attention: for though it may not be possible to obtain proof of actual penetration, those minor matters, relating to bruises, scratches, stains, &c., may have the effect of establishing the prisoner's guilt on a charge of *assault with intent to commit* a rape. It is by no means unusual, when the capital charge fails, for the judge to direct another indictment to be preferred, charging the prisoner with the misdemeanor.

A report, taken from Sedillot (*Manuel complet de Méd. Lég.*) may serve as an illustration of some of these rules.

"We, the undersigned, went this day, at eight o'clock in the forenoon, to visit the daughter of M. G., aged 16, who was said to have been violated yesterday evening at ten o'clock.

"Upon entering the chamber, we found the girl in bed, concealing her face. We were told that on the preceding night she allowed herself to be prevailed on, under false pretences, to enter the room of M. D., aged ——, who, after making her certain proposals, accomplished his purpose, having previously used violence, and ill-treated her, and threatened her with death. Upon examination, we observed that the girl was sufficiently grown and well formed for her age, but delicate and very timid: she seemed to have previously enjoyed a state of perfect health. We saw on her arms, her chest, and lower limbs, several recent ecchymoses,—some of them were close together, and on the arms indicated the pressure of fingers: on the thighs, they were larger and more apart, where it seemed they were occasioned by the closed fist and the bruises of the knees. The whole pudenda were swollen, and there was a discharge from them of a mucous fluid of a yellowish white colour: the external labia were red, and, as it were, slightly glued together; the nymphæ were tumefied, very red, and presented the appearance of laceration, still bloody, and covered with mucus.

"The hymen was ruptured—its remains were distinct and bloody: the mucous coat of the vagina, which was strongly marked with rugæ, was inflamed and contused; all the parts were painful; and various red spots diffused over the pubes and the thighs, particularly their upper and inner part, gave evidence of recent violence.

"Having requested to see the dress which Mdlle. G. wore at the time of the alleged violation, it was brought to us. The chemise was stained with blood in several places; and we also noticed certain greyish spots, not very thick, but sufficiently tough, making the cloth stiff, as if it was starched in those places. We moistened them, upon which they gave out a very well-marked spermatic odour; and on putting them to the fire, they assumed a distinct reddish-yellow hue. As we were desirous of leaving no doubt about the matter, we collected a small quantity of it in a watch-glass. It formed flakes and cloudiness in the distilled water which held it in suspension, and which had become alkaline. We then evaporated the liquor, and the residue was of a light brown colour, which, when treated with some drops of distilled water, was dissolved but in part, leaving a yellowish-grey glutinous substance, which disappeared in a solution of caustic potash,—facts which leave not the least doubt in our minds of the presence of semen.

"We therefore hold ourselves justified in concluding—from the existence of the contusions and ecchymoses which we observed, from the above-mentioned state of the genital organs, and from the spots of blood, and of semen, detected on the clothes—that the person of Mdlle. G. has been *violated*. In which persuasion we affix our signatures to this report.—Dated Paris, 17 July, 1823."

REPORT

OF THE

LONDON COMMITTEE OF THE BRITISH ASSOCIATION,

ON THE

MOTIONS AND SOUNDS OF THE HEART*.

August, 1836.

The Committee of members of the British Association resident in London, charged with the investigation of the motions and sounds of the heart, have had numerous meetings, and performed a con-

* Read at the Bristol meeting of the Association, and communicated to the Medical Gazette.

siderable variety of experiments on living and on dead subjects, with a view to the ends of their appointment. They have also taken pains to inform themselves of the facts and reasonings published by recent inquirers, and have now the honour to submit to the Section the results at which they have hitherto arrived, together with such particulars of their experiments as they consider necessary to substantiate their conclusions.

Before entering, however, upon the statement of their experiments, or of the conclusions to which they lead, they beg leave to say a few words with regard to the scope and plan of their inquiries, and the spirit in which they have entered on them. The Committee would first remark that, though in their inquiries they did not neglect to take note of any phenomena which might illustrate the action of the diseased heart, yet they have felt it their especial duty to investigate the physiological branch of the subject, and have principally occupied themselves with that part which includes the normal sounds of the heart.

With regard to the general views by which they have been guided, they wish to observe that, in entering upon the investigation, it seemed to them possible, *à priori*, that each sound of the heart might have a single peculiar cause, or several co-operating causes; and, if several co-operating causes should be found more probable, that then some of such causes might be only contingent or occasional, and others constant and invariably present; also upon the supposition of a plurality of causes of one or both sounds, that some causes might be common to both sounds, or that each sound might have its own set of causes exclusively. Keeping in view these several possible *à priori* positions, the Committee made an enumeration of the circumstances attending the heart's action that had been, or might be, supposed capable of producing sound, and endeavoured so to vary their experiments, as to exclude in turn each of those circumstances, with a view to isolate, or at least to bring sufficiently into relief, the essential cause or causes of each sound. To the execution of the plan of experimental inquiry thus glanced at, the Committee have devoted some time during the summer, in the course of which they have had to encounter numerous difficulties, especially from the want of sure means of destroying the sensibility of the animal, without suspending or greatly impairing the action of the heart. And in this respect they have been much less fortunate than several preceding experimentalists, having in no one of the numerous subjects on which they have operated, been able to continue their observations for a longer period than forty-five minutes, notwithstanding the utmost care to avoid unnecessary loss of blood, and to maintain artificial respiration.

It is proper to add, that the subjects of their observations were in most instances young asses from three to six months old, in apparently good health; and that the mode of preparation was in a few instances poisoning with woorara, in others, stunning by a blow on the head; but in a majority of the experiments the animal was pithed. Other animals were tried as well as young asses, viz. the horse, the dog, and the domestic fowl: but, for various reasons, these trials were not attended with results recommending their repetition.

The Committee consider the most convenient order in which to state the facts in their possession, and their inferences from those facts, to be, to describe first succinctly, and from the notes taken on the spot, such of their experiments as gave available results; then briefly to notice under the head of each supposed or possible cause, such points in the experiments as may seem to the Committee to make decidedly in favour of, or against the claims of each of such possible causes; and lastly, to give a summary of the conclusions which the Committee have adopted from the whole of their inquiries.

Memoranda of Experiments, &c.

To satisfy themselves fully as to how far the sounds might be modified by circumstances, such as the state of the lungs, whether distended or collapsed; the state of the circulation, whether excited or tranquil; and the position of the body; the Committee examined the heart on their own persons under all those varieties of circumstance, and found that when the subject of observation is supine, or leaning a little backwards and towards the right side, the first sound is uniform, dull, and without any considerable impulse; but when leaning forwards, and especially if inclining much to the left side, the first sound is louder and fuller-toned, and accompanied

by strong impulse; they found also that full respiration operated like leaning to the right, or the supine position—by diminishing sound and impulse; while full expiration, like leaning forwards and to the left side, rendered the sounds and impulse more distinct; the former louder, the latter stronger and more diffused. When the heart's action is excited by exertion, they found, as might be anticipated, the systolic sound and impulse at their maximum of tone and force. Moderate exertion they observed to increase the intensity of both sounds,—whereas sudden exertion, sufficiently violent greatly to accelerate the action of the heart, they found impaired the distinctness of the second sound, the first continuing loud, short, and with strong impulse. The indistinctness of the second sound in rapid pulsation of the heart seemed to depend in part on its following so closely on the loud first sound as to be masked by it.

Exp. 2.—The Committee made similar experiments on voluntary muscular contraction, with a view to ascertain how far that act is accompanied by sound. The muscles operated on with best effect were the buccinator, masseter, muscles of the neck and forearm, and of the parietes of the abdomen. And in all those the flexible ear-tube carefully applied so as to prevent friction, yielded sounds more or less striking; but the most remarkable results were obtained from the last mentioned parts. From the abdominal muscular contractions, sounds of a "systolic" character, if the expression is admissible, in all respects, and as loud as, or louder than those of the heart, were with facility obtained. The sounds were produced by sudden expiratory efforts, made with force and with the mouth closed, and were obtained with the flexible ear-tube from various parts of the parietes. The sound of muscular contraction seems in the case of the abdominal muscles to be exaggerated by the hollowness of the subjacent parts.

At the time the sound was heard, the muscle under observation always felt to the finger tense and hard, but the sound ceased at the moment that the fibres had attained their maximum of tightness and hardness, and was not renewed except by a repetition of the contractile effort after previous relaxation.

Exp. 3.—Subject a young ass, poisoned with woorara introduced into an incision in the flank.

The animal died sixteen minutes after the introduction of the woorara; much blood was lost in opening the chest; the heart was acting at the moment of exposure, but not strongly; its action became more regular after inflation was made more steadily.

Both sounds were heard with the instrument applied to the great arteries, but the sound with impulse, or first sound, alone was heard on the ventricles.

The heart, when yielding these sounds, could not, the Committee were satisfied, strike against the chest's walls, or any other hard object.

After opening the pericardium the sounds were weaker, but both sounds were heard with the stethoscope applied to the roots of the great arteries. Both sounds were heard also on the great arteries, when a portion of lung was interposed between the instrument and the great vessels. The heart continued to act for forty minutes.

Exp. 4.—Subject a young ass, prepared as the last. Death twenty-six minutes after poisoning.

At the roots of the great arteries the two sounds were distinctly heard, but after the introduction of two curved awls into the arteries, for the purpose of hooking up one lamina of each sigmoid valve, the second sound was wanting, the first being indistinct. On withdrawing the awls, two sounds were heard, and soon after the heart ceased to act, twenty minutes after the death of the animal. At each systole, while the heart acted vigorously, the ventricles felt to the finger as hard as cartilage.

The heart being cut out and plunged in warm salt and water, a slight undulatory contractile motion pervaded the substance of the ventricles and columnæ carneæ, and continued for some time. In this and every other observation, this vermicular or undulatory motion supervened upon the cessation of the normal action of the organ, and never before the organ had ceased to act as a whole.

Exp. 5.—Subject a donkey, 7 months old, which expired 43 minutes after being poisoned with woorara.

The heart just before death was heard with short loud pulsations. When the chest was opened it ceased to beat, and was very much distended with blood. When part of the blood was let out by cutting the pulmonary artery, the ventricles began again to pulsate feebly, but without sound. When the heart was cut out, it presented the undulatory motion, which was increased by immersion in cold water. The two ventricles being opened by cuts at the apex, at right angles to the septum, and the heart being drawn with the apex upwards through water, the laminæ of the mitral and tricuspid valves were seen to close together each time the heart was so drawn upwards through the water.

Exp. 6.—Subject a young ass, destroyed by pithing.

On opening the chest the heart acted regularly, producing both sounds distinctly. Curved awls were then introduced into the aorta and pulmonary artery, to hook back the valves, when the second sound was replaced by a sucking or bellows sound. The awls being withdrawn, both sounds were again heard; the heart acting feebly.

Exp. 7.—Subject a young ass. A small quantity of woorara was introduced into the flank, but without destroying life, and the animal was dispatched by a blow on the head.

Heart acting very quickly and strongly when the chest was opened; first sound only audible. The auricles being pushed in by the fingers into the ventricles, so as to keep the auriculo-ventricular valves open, the first, or impulse sound, only heard; the second sound wanting. On withdrawing the fingers from the auricles both sounds were audible, the heart acting more slowly, but yet strongly. The roots of the arteries being compressed between the fingers and stethoscope, the first or impulse sound only heard, accompanied by a loud bellows or rasp sound. On removing the pressure (from the arteries), both sounds again became audible. An incision being then made into the left auricle, a finger was passed through the auriculo-ventricular orifice to the bottom of the left ventricle, and the fingers of the other hand being placed under the right ventricle, the heart was compressed between the hands, so as to obliterate the cavity; the first or impulse sound was still distinctly heard by all, but weak.

Exp. 8.—Animal a young ass, destroyed by a blow on the head.

The heart at first acted convulsively, as from great exertion, but afterwards nearly normally slow for a short time. While the heart's action was quick, no second sound was heard; but after it became slow, both sounds were heard: shortly afterwards its action became too feeble and irregular for observation.

Exp. 9.—Subject a young ass. Poisoning by introduction of 24 drops of an inefficient preparation of coneia into the peritoneum proving unsuccessful, the animal was ultimately pithed.

On opening the chest the heart distinctly audible as to both sounds, and in vigorous action. The fingers were pushed into the auricles, and through the auriculo-ventricular orifices, when a first sound was heard, prolonged by a whizzing sound. On withdrawing the fingers both normal sounds were heard. Needles were then introduced to hook up a lamina of the sigmoid valves of aorta, when the second sound was heard by two observers. The pulmonary sigmoids were also attempted to be so treated (the aortic valves being continued under the needle), when two observers heard the two sounds, but not the third observer*.

Exp. 10.—Subject a young ass; pithed. Chest immediately opened, when the heart was acting slowly but forcibly. At first no second sound was heard, but a bellows sound (instead); then a violent action was attended with a single sound, accompanied by a bellows sound, which (latter) ceased as the heart became more slow in action, after which both sounds became distinct; then the arteries being pressed with the finger at their origins, a first sound was heard, with a blowing murmur accompanying, and another murmur following, but no flapping (or second) sound. On removing the pressure (from the arteries), the second sound was heard, and the murmur ceased. Immediately after the systole a flapping or jerking sensation was sensible to the finger applied to the arteries at their roots. The inversion of the auricles was accompanied by a sensation of thrilling in the finger of the operator. The auriculo-ventricular valves were found to act in water after the removal of the heart from the body, closing on its being drawn, apex upwards, through water.

Exp. 11.—Subject a young ass; poisoned with essential oil of bitter almonds.

A small opening was made in the cartilages opposite the heart, when the stroke was perceived and felt by the fingers inside and outside the sternum at the same time, with sound and with considerable pressure upwards against the finger placed between the heart and cartilages. The chest and pericardium were then opened, which latter had a little serum in it. After turning over the animal on its left side, so as to make the heart hang vertically out of the chest, a first sound was heard through the tube applied to the ventricles, but no second sound. The same sound was heard on the right auricle posteriorly, without the second sound: the heart acted in both cases weakly. The tube being applied to the roots of the arteries, gave the same result to one observer—*i. e.* a first without a second sound. The animal be-

* The Committee were uncertain how far the hooking up of the valves was really effected, owing to want of strength in the needles; they were not afterwards able, as in other cases where curved awls were used, to find the marks of the needles, so as to ascertain the direction in which they had passed.

ing again laid on his right side, the first sound was heard by two observers. Circumstances prevented the third member of the Committee from auscultating during this experiment, which was not repeated.

Exp. 12.—Subject as above, and pithed. Heart acted 33 minutes. On opening the chest the two sounds were heard, the heart acting slowly and with tolerable force.

The auricles were then inverted by the fingers, and the first sound, continued into a bellows murmur, was heard. The murmur was accompanied by a thrilling motion, sensible to the finger of the operator, and synchronous with the impulse. A lamina of each sigmoid valve was then hooked up (with disseeting hooks), when a sound was heard not followed by a second sound; but on removing the hooks, the second sound was again heard. On inverting the auricles again, the chordæ tendineæ of the mitral valve alone were felt to become tense in systole, and lax in diastole. A finger being introduced into the left ventricle, through the auricle, the first sound was heard with a murmur.

Exp. 13.—Subject a young ass; pithed. On opening the chest and the pericardium both sounds were distinctly heard, but feeble.

On touching the arterics in the vicinity of the valves, a sensation of flapping (or jerking) was observed by all, commencing immediately after the systole, and accompanying the second sound.

The awls being introduced into the arteries (so as to hook up the valves), the second sound was wanting. After removing the awls, at first only the systolic sound was heard, but after a short time both werc heard by all.

On opening the heart (at the close of the cxperiment), the valves were found to have been sufficiently hooked up in both arteries.

Exp. 14.—Subject a young ass; pithed. After opening the chest the pericardium was opened, and a thick layer of tow was interposed between the heart and surrounding parts, the heart continuing to act. At first the systolic sound was heard, followed by a bellows murmur; but afterwards the flapping sensation, and second sound, were very distinct also.

The finger being introduced into the left ventricle by inversion of the auricle, was felt to be gently embraced and pushed, as if by a membrane distended with blood. On the right side nothing similar was unequivocally observed. On pressing the aorta or pulmonary artery between the finger and thumb gently, a *to and fro* thrill was felt accompanying the systole and diastole of the ventricles, and terminated by a flap. The sensation of flapping (or jerking) was felt to be synchronous in the two arteries.

The tension and hardness of the ventricles, during their systole, were very remarkable.

The pulmonary artery being cut across, the first sound was still loud: and the aorta being then cut across likewise, the same result was obtained—viz. a first without a second sound. The heart was then severed from its other attachments, and the systolic sound was still heard distinctly. The heart was then grasped strongly under blood: it continued to contract vigorously, and the first sound was heard (but not loud) with the flexible tube as well as the common stethoscope. The heart was then taken out, and held in the hand of one of the Committee; when the first sound was distinct, but feeble. On opening the right ventricle, the columneæ carneæ were distinctly seen contracting simultaneously with the ventricle.

Such are the particulars of all the more successful experiments of the Committee. With regard to those possible causes of the normal sounds of the heart, which have been investigated by the Committee, the principal of them are as follows:—The first sound has been attributed to,

1. *Impulse*, or the beating of the heart against the parietes of the chest.
2. *Muscular sound*, or the resonance attending muscular contraction.
3. *Collisions of the particles of the blood* against each other, or against the parietes, valves, &c. of the heart's cavities.
4. The *action* of the *auriculo-ventricular valves* during systole.
5. And the *collision* of the *opposite interior surfaces* of the *ventricles* in the same state.

The normal or second sound has been attributed to,

1. *Impulse of the heart against the thoracic parietes*, owing to the rapid expansion during diastole.
2. *An intrinsic sound* attending the diastole, analogous to that which the observations of the Committee prove to attend the systolic action of the ventricles.
3. *Flapping of the auricolo-ventricular valves*, during diastole, against the sides of the ventricles.
4. The *rushing* of fluids *into the great arteries*, after the systole.
5. The *rushing* of the fluids *from the*

auricles into the ventricles during diastole.

6. *Sudden tension and flapping* of the *sigmoid valves* after the systole.

Of the causes to which the first sound has been attributed, the Committee feel it necessary to notice each separately, except the last. With regard to the alleged causes, however, of the second sound, they will feel themselves justified in being less minute; partly to avoid tiresome repetitions, but principally on account of the obvious preponderance of evidence, as the Committee conceive, in favour of the theory last-mentioned.

First Sound.—Valvular Tension.

It is well known that several eminent writers have attributed the first sound to the sudden closure of the auriculo-ventricular valves during the systole. With reference to that question, the Committee have made the following observations:—

1. Inverting the auricles, and passing the finger into the auriculo-ventricular orifices, does not prevent the first sound, though it must prevent the action of the valves. (Exp. 58.)

2. In the experiments just referred to, the action of the mitral valve, as felt by the finger, was of too gradual and feeble a kind to be capable of producing sound; while, on the right side, the tightening of the tricuspid was not strong enough to be sensible to the finger at all.

3. Various instances where the ventricles were treated so as to obliterate their cavities by pressure, and render valvular action impossible, gave, nevertheless, the first sound. (Exp. 6, 7, &c.)

From those facts, the Committee conclude that valvular action is not a cause of the first sound.

First Sound. — Collision in the Fluids, &c.

The following are the facts observed by the Committee, with regard to the alleged sonorous collisions of the particles of blood amongst themselves, or against the parietes, valves, &c. of the ventricles.

1. The obstruction of the auriculo-ventricular orifices, by the fingers introduced by inverting the auricles, does not materially modify the first sound. (Exp. 7, 8, &c.)

2. The heart being pressed between a finger introduced through the auricle to the bottom of the left ventricle, and the other hand placed outside the right ventricle, continued still to emit the first sound. (Exp. 7 and 12.)

3. The heart being grasped firmly in the hand, after separation from its attachments, and while immersed in blood, gave the first sound distinctly. (Exp. 14.) The pressure in this case must, in the opinion of the Committee, have prevented friction between the opposite interior surfaces of the organ.

4. The division of the aorta and pulmonary artery, and even the extraction of the heart, does not prevent the first sound. (Exp. 14.)

5. The Committee made also various experiments in order to ascertain the power of fluids to produce sound when in contact with solids.

On compressing, by the stethoscope, the gum elastic bottle, filled with water and under water, they could not succeed in producing any other sound than occasionally a bellows-sound. The power of obstructed currents of liquid to produce the various modifications of the *bellows* sound, was further illustrated to the Committee in several experiments on animals, in which pressure of the arteries, partial obstruction of the auriculo-ventricular orifices, and the suspension of the action of the sigmoid valves, were repeatedly accompanied by this phenomenon: the thrill accompanying this sonorous passage of liquids was, in every case, sensible to the finger.

6. To this we may add, that the experiments of MM. Pigeaux and Piorry (Archiv. gén. de Méd., &c.) have been repeated by the reporter, in the presence and with the assistance of Dr. Edwin Harrison, and other gentlemen, not of the Committee, but in no instance of several trials was any thing like the first sound produced.

From the preceding facts, the Committee conclude that the normal first sound of the heart is in no degree referable to any collisions of the particles of the fluids amongst themselves, or against the parietes, &c. of the ventricles.

First Sound.—Impulse.

The facts relating to the connexion of impulse with the first sound, that are contained in the preceding experiments, are the following: — In a variety of circumstances, in which it is difficult to see how impulse could occur to cause sound, the systolic sound was distinctly audible—viz.

1. When the heart lay exposed, de-

prived of its pericardium, and supported by the mediastinum alone, as in Exp. 1.

2. When the heart was held between the fingers, with some force of pressure, the left side cavities being empty, or nearly so, as in Exp. 12.

3. When the heart was imbedded in tow. (Exp. 14.)

4. When the heart hung out of the thorax by its vessels, removed from all contact to which sound might be referred, as in Exp. 11.*

5. When the heart was severed from all its attachments, and grasped strongly in the hand, as in Exp. 14.

On the other hand, several facts show that the impulse against the ribs may produce sound.

1. In Exp. 11, and in others, in the memoranda of which the fact has been omitted, the heart, during systole, was felt, both outside and inside the chest, to press with force against the sternum and cartilages.

2. In our observations on the effects of posture, we remarked, that leaning to the left or forwards, gave additional force to the impulse and loudness to the the sound; while inclination of the body, such as to cause the heart to gravitate away from the ribs, diminished at once the sound and impulse.

3. To those we may add the facts pointed out by Dr. Spittal, (Edinburgh Medical and Surgical Journal) *which have been repeated and verified by the reporter*, assisted by Dr. E. Harrison and other gentlemen not of the Committee, and which seem to prove that if the living heart impinge with any force upon the walls of the thorax, sound must result.

From the whole of these facts the Committee conclude that impulse is not the principal cause of the first sound, but that it is an auxiliary and occasional cause, nearly null in quietude, and in the supine posture, but increasing very considerably the sound of the systole in opposite circumstances.

First Sound—Muscular Tension.

The facts ascertained by the Committee relating directly to muscular tension as a possible cause of the first sound, are few but striking, and in their judgment decisive.

1. The heart in systole becomes suddenly, from a comparatively soft and flaccid body, extremely tense, and to the touch hard as cartilage. (Expts. 4 and 14, and many others in which the fact was not recorded).

2. The unvarying and uniform character of the systolic sound, however diversified the circumstances in which the heart was placed (Expts. 3, 7, 11, 14), furnishes a strong argument in favour of its intrinsic nature.

3. The voluntary muscles, when suddenly contracted, become tense and hard, and emit sounds resembling strikingly the first sound of the heart. This is especially observable in the action of the abdominal muscles. (Expt. 2.)

4. From these experimental facts, taken along with the self-evident fact, that the muscular tension thus experimentally proved to be sonorous is an essential part of muscular contraction, the Committee conclude that the first sound of the heart is a physical result of the sudden transition of the ventricles from a flaccid condition to a state of extreme tension;—that, in a word, the first sound is essentially a muscular sound.

Second Normal Sound of the Heart.

We now proceed to the consideration of the normal second sound, and of the hypotheses that have been, or might be, advanced respecting it, and the facts we possess that throw light on its causes and mechanism.

The Committee had proceeded but a short way in their experimental inquiries, when they found the conclusion forced on them, that the majority of the hypotheses (above enumerated) regarding the second sound, were wholly untenable. In some of their first experiments they found that the second sound might be absent, although the first sound was present and the systolic and diastolic actions were quite normal. The second sound, for example, was suppressed by—1, pressure on the roots of the arteries; 2, by hooking up a valve of each set of sigmoids; 3, by suspending the heart out of the chest; 4, by inverting the arteries, &c. (see Expt. *passim*): the first sound and alternate ventricular actions continuing unaffected in any material degree in each case. Such facts, of which there are many in the accounts of the experiments, seemed to the Committee quite incompatible with any other hypothesis respecting the second sound than the

* In the four experiments just referred to, the instrument was applied to the arteries near their roots.

last, viz. that which refers it to the action of the semilunar valves. Besides, several of those hypotheses appeared liable to the weighty preliminary objection, that they are wholly arbitrary, and without any foundation, so far as the Committee have been able to ascertain, in accurate observations or experiments. Under those impressions the Committee think it best to proceed at once to state the facts which, in their opinion, tend to establish the action of the sigmoid valves to be the cause of the normal second sound. For this some repetition perhaps may be necessary, but will, it is hoped, be excused.

The following experiments were made with especial reference to the mechanism of the second sound.

1. Pressure with the fingers and thumb was exerted on the arteries close to the sigmoid valves, so as to flatten the tubes a little, and the second sound, previously clear, and in every respect normal, was immediately suppressed, and a bellows murmur was heard instead: this murmur ceased, and the normal sound returned instantly on the removal of the fingers. (Expts. 7 and 10).

2. A degree of pressure sufficient, it was conceived, to change but very slightly, if at all, the shape of the vessels, gave to the finger sensations of currents moving in opposite directions,—the one current, from the heart, more striking and coinciding with the systole,—the other, towards the heart, less forcible, and synchronous with the diastole, and ending suddenly by a sensation of flapping or jerking. (Exp. 14).

3. The fingers being applied gently to the regions of the sigmoid valves, and the ear-tube applied to the heart, the flapping sound was heard, and a sensation as of a gentle tap was felt by the finger in coincidence with the diastole and second sound. (Exps. 10 and 14).

4. One valve of each set of sigmoids was hooked up in each artery successively, and the jerking motion invariably ceased, with one *apparent* exception only, and continued suppressed in the artery in which a valve had been so hooked up. If a valve in one artery only was so engaged, the second sound was weakened; but if a valve of each set of sigmoids was fixed, then the second sound wholly disappeared. In some instances there was a murmur of the sucking or blowing kind following the systole during the suspension of the valve; in other instances there was absence of sound simply. (Exps. 4, 6, 12, 13).

5. The arteries were cut across close to the sigmoid valves, the veins being left entire, and the heart beating with considerable force; the ear-tube was then applied, but gave only one sound, and that one coincident with the systole. (Exp. 14).

6. In the separated heart the first sound was repeatedly observed, but the second sound never.

Summary and Conclusions.

1. The first sound of the heart, as heard in the chest, is generally complex in its nature, consisting of one constant or essential sound, and one perceptible only under certain circumstances. This constant element of the first sound may be considered as intrinsic, appearing to depend on the sudden transition of the ventricles from a state of flaccidity in diastole to one of extreme tension in systole; while the extrinsic, or subsidiary sound, which in a variety of circumstances contributes largely to the first sound, arises from the impulse of the heart against the parietes chiefly of the thorax.

2. The collisions of the particles of the blood amongst each other, or against the interior parietes, valves, &c. of the heart, do not appear to have any share in the normal first sound of the heart; neither do the motions of the auriculo-ventricular valves; and the attrition of the opposite interior surfaces of the heart's cavities seems purely hypothetical.

3. The principal and apparently only cause of the second normal sound of the heart is the sudden closure of the sigmoid valves, by the columns of blood that recoil back on them during the diastole, impelled by the elastic contraction of the arteries.

4. The columnæ carneæ appear to act simultaneously with the parietes of the ventricles, and in such a manner as to make it apparently impossible that the auriculo-ventricular valves should close with a flap in the same manner as the sigmoid valves*.

* An opinion which is further confirmed by the anatomy of the heart of the domestic cock, in which M. Bouillaud (Du Cœur, tom. i.) appears to have heard both sounds with the naked ear. In that animal there is no tricuspid valve resembling that of man, but the valvular office is discharged by laminar ex-

To conclude : the Committee feel strongly that the subject of the heart's motions and sounds requires further investigation, especially in their pathological relations, and a wider range, and greater variety of experiments, than have hitherto been performed.

(Signed)

C. J. B. Williams, M.D. F.R.S. &c.

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Reporter.

NERVES AND MUSCLES OF THE ORBIT.

To the Editor of the Medical Gazette.

Sir,

I could not help regarding Mr. Thurnam's communication, on the comparative anatomy of the muscles and nerves of the eye-ball, as one of considerable interest. The spirit of research, as well as the correct feeling it displays, appear to me worthy of commendation ; and I think the question put by that gentleman is capable of a satisfactory answer.

The notion that the retractor muscle of the eye of quadrupeds is intended simply for the suspension of that organ, cannot now, I think, be maintained. The fact that this muscle is found only in those creatures who possess the *haw*,—that it neither exists in the quadrumana, or in man,—and that in birds there is a direct communication between the third eye-lid and the quadratus and pyramidalis muscles, which are absent in quadrupeds, all seem to imply that there is a relation between the two. This is now, I presume, very generally admitted.

In experiments on the eyes of quadrupeds, I have always found that on pushing the ball backwards and from the temporal side, the haw has been made to start forward over the front of the eye. The question that I would offer for consideration, then, is this—does the action of the retractor muscle, conjointly with that of the abductor, pull the eye backwards and outwards in a similar manner to that in the experiment above noticed, and thus cause a protrusion of the haw? If so, we see at once, why these two muscles should be so intimately connected as they are made to be, by being supplied with branches of the same nerve. Undoubtedly, the arrangement of the nerves of the eye generally would lead to the conclusion, that where there is a common distinction of nervous filaments, there must likewise be a relation, more or less, between the offices of the different parts to which they go. We see this principle displayed here in the most striking manner ; as, for example, in the case of the levator palpebræ and levator oculi, so that we cannot but regard it as one of first-rate importance. Sir C. Bell seems to have entertained some idea of there being a relation between the action of the two muscles in question, — "that there is something common to the retractor oculi and the rectus externus*." Elsewhere, however, Sir C. Bell says,—"In quadrupeds I have ascertained that the oblique muscles act when the haw is protruded, but I have also found that the retractor oculi alone is capable of forcing forward the haw†."

On the whole, I see no reason for concluding that the fact of the retractor muscle being supplied by the sixth nerve, at all militates against the explanation of the functions of the muscles and nerves of the eye-ball, as given in my paper of the 24th September. As Mr. Thurnam has himself remarked, the view suggested by Mr. Hunt, and since carried out and perfected by himself, refers to the *primary* and more important functions — functions which are common to all creatures in which the eye is fully developed; whereas, the fact of the branches of the sixth nerve supplying the retractor muscle has reference to secondary arrangements, and such as are but partial in their application.—I have the honor to be, sir,

Your very obedient servant,

John Walker.

Manchester, Nov. 28, 1836.

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tensions of the substance of the parietes of the ventricle, which meet in the middle, so as during the systole to cover the auriculo-ventricular orifice.

* The Nervous System, 4to. p. 215.

† Ibid. p. 191.

TREATMENT OF LUNG DISEASE.

To the Editor of the Medical Gazette.

Sir,

If it be not a generally-known fact that the tartar emetic is such an excellent remedy for inflammation of the mucous membrane of the lungs, I take the liberty of sending you the following case, in addition to that of Dr. Kemp, which, if you consider worthy a place in a corner of your valuable journal, is quite at your disposal.

A short time since I was suddenly called to a Mrs. B., æt. 28, married, but without children, of consumptive aspect, and whose father died of phthisis. She had been suffering from an affection of the lungs previously to this, for which she had had the advice of a medical man, and was much better, some days before I saw her. When I saw her she was labouring under the greatest degree of dyspnœa it has ever been my lot to witness; a most distressing cough, so that she could not speak; and a pulse of 130. My impression at the time certainly was, that she could not live: however, I determined to try the effect of tartarized antimony, and ordered the following:—

Antim. Tart. gr. ij.; Træ Digit. ℿxxx.; Oxym. Simp. ʒvj.; Aq. Distil. ℥viij. Cap. coch. ampl. ii. quaq. h.; and a blister to the chest.

This treatment, sir, acted like a charm, and in two or three days I had the satisfaction of seeing my patient in a comfortable condition (comparatively.) I was soon after obliged to discontinue the medicine, as it occasioned so much sickness. The after-treatment was such as would suggest itself to every enlightened mind.

I should say though, that after the violence of the attack had subsided, my patient laboured under the most marked symptoms of tubercular disease, and I scarcely dared to hope she would be restored to health; but they gradually gave way, and in six weeks she was as well as she had been for the last two years.

In the latter part of my treatment I gave her the træ. ferri mur. in ℿx. doses, and think it did some good; but I certainly cannot lay claim to much credit for any thing I did towards the removal of the phthisical symptoms, and am disposed to think that nature effected the cure.—I am, sir,

Very respectfully yours,

Edwin Ellis.

Tulse Hill, Brixton,
Nov. 30, 1836.

DR. EDWIN HARRISON ON PHYSICAL SIGNS.

[Dr. Edwin Harrison, in continuation of the investigations connected with the physical signs of disease, in which he has been for a considerable time engaged, and some account of which has been communicated to our readers by his friends Dr. Williams* and Dr. Clendinning†, has transmitted to us the following propositions.—Ed. Gaz.]

One or more of the following circumstances present themselves in a sufficient number of instances to deserve, I think, the attention of those who take an interest in physical signs:—

1. A depression about the height of the lower dorsal, or first lumbar vertebra, from which the finger, in mounting along the spine, will come to another depression, corresponding with tolerable accuracy to the height of the diaphragm at that part.

2. On moving the hand along either side of the chest vertically, on what may be considered as the median line, it will sink into a depression corresponding to the height of the diaphragm on that side.

3. A depression, or depressions, between the ribs, can be felt, or seen, or both felt and seen, at each abdominal inspiration, indicating (at least in the physiological state) the presence of the diaphragm in that part of the chest.

By this means the height of the diaphragm on the left side can be judged of, to a certain extent, even through the heart.

Query—What relation do these last-named depressions bear to the tilting up of the chest, which occurs not merely at its lower parts, but as high up at least as the lateral depressions previously mentioned?

* Med. Gaz October 3, 1835.
† Ibid. July 23, 1836.

It is scarcely necessary to add, that these remarks are offered as mere generalities, and, as such, are open to exceptions, limitations, &c. some of which I hope to be able to speak of hereafter with more precision than I can at present.

If it should turn out that my opinions are not so original as I believe them to be, I trust that I shall always be found ready to make the avowal.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Elements of the Practice of Physic; presenting a View of the present state of special Pathology and Therapeutics. By DAVID CRAIGIE, M. D. F.R.S.E., &c. &c. Edinburgh, 1836.

THERE exists not, in medical literature, a greater desideratum than a good elementary work on the practice of physic. The voluminous "Study" of Mason Good, and the elaborate essays in the "Cyclopædia," and in the "Dictionary" of Dr. Copland, form great stores, from which the student may draw, when seeking for all that is known on any particular subject; but they are scarcely adapted for the student, who requires to have his knowledge in a more condensed form, and, as it were, already digested for him. We never expect to meet with any work which shall equal the "First Lines" of Cullen; so admirably suited to its purpose, that it kept possession of the schools long after the theory which pervaded it had become obsolete. Long was it attempted, by notes and additions of various kinds, to accommodate it to the progress of science, but the effort has become utterly hopeless, and the work may now be regarded as the production of a by-gone period, no longer qualified to constitute the hand-book which is to initiate the student into the mysteries of physic. Such has been the dearth of efficient successors to Cullen in this department, that we apprehend lecturers on medicine must often be at a loss what elementary work to recommend to their pupils: for there are several which profess to have supplied the deficiency, yet they are all either superficial and defective, or marred by some peculiar crotchets of the author's own, to the exclusion of sounder doctrines; and thus they become unsuited for their ostensible purpose.

The work before us seems to be calculated to hold an intermediate place between the more superficial books manufactured professedly for students, and the elaborate volumes above alluded to. The first volume only has appeared, and it seems intended that there shall be but two altogether. This would make about 2000 pages of a pretty close type, and therefore affords ample space for the intended purpose. It is quite folly, or affectation, in any man to suppose that he can construct a system calculated to convey any thing like a complete view of the present state of medical science, from his own individual observation and experience. Dr. Craigie has wisely avoided attempting this, and has endeavoured, in its place, to present us with a work embodying the "united result of the observations and researches of all the ablest pathologists and physicians by whom the science of medicine has been cultivated, and by whom it has been simplified, improved, and rendered energetic."

Each chapter is preceded by a list, chronologically arranged, of those works upon the subject to which it relates, which Dr. Craigie deems most worthy of being consulted, and a condensed view is given of the leading doctrines and facts, followed by the inferences of the author himself. Established modes of treatment, whether old or of recent introduction, are throughout preferred to those which, if possessed of more novelty, are still under probation, and the pathological characters of the disease are always referred to in connexion with the therapeutic indications.

Of the fulness of the articles some idea may be formed from this—that the chapter on Ague occupies 114 pages; within which space is comprised a longer or shorter notice, we really believe, of every important point connected with the history of the disease, as well as of numerous remedies which have at various times been recommended.

Upon the whole, we are inclined to regard Dr. Craigie's Elements as the best we at present possess; and we trust that the second volume will not be delayed in the manner which has of

late become the *fashion*, rendering so many of those works which are brought out in parts comparatively useless.

Coup D'Œil sur Les Hopitaux de Londres, et sur l'état actuel de la Médecine et de la Chirurgie en Angleterre. Par Edwin Lee, Membre du Collége Royal des Chirurgiens, Londres.

It can scarcely be expected that the work bearing the above title should afford much information to the English reader, nor is this the author's object. Mr. Lee has visited the principal medical institutions of the Continent, and has thus had an opportunity of observing the general ignorance which prevails with respect to the state of the hospitals in this country; and with a view of contributing to remove this, has given a short sketch of the metropolitan institutions of England, which he has very properly written in the French language, and published abroad.

It is, we believe, the only effort to enlighten our neighbours on the subject which has been made since the work of M. Roux; which has been rendered obsolete by the numerous changes that have subsequently occurred.

NEW GERMAN PUBLICATIONS*.

Denkwürdigkeiten in der ärzlichen Praxis. (Memoirs and Papers relating to Practical Medicine.) Von Dr. J. H. Kopp. Drei Bände. Frankfurt, a. M. 1836.

The name of Dr. Kopp, of Hanau, is somewhat familiar to our readers, through his able article on thymic asthma, which we lately published. That article is contained in the third volume of this collection, along with a variety of other contributions to medical practice. The second volume is wholly devoted to an estimate of the homœopathic quackery.

Die Erkenntniss und Heilung der Ohrenkrankheiten. (On the Nature and Treatment of Diseases of the Ear.) Von Dr. Wilhelm Kramer. Berlin, 1836.

Sammlung auserlesener Abhandlungen und Beobachtungen aus dem Gebiete der Ohrenheilkunde. (A Selection of Papers on the Treatment of Ear Diseases.) Herausg. Von Dr. C. G. Lincke. 1—3. Leipzig, 1836.

The first of these works is a systematic treatise, in which the diseases of the ear, and their appropriate remedies, are regularly noticed. The second is a production which appears periodically (not, however, at regular intervals), on the same subject: among the selected papers are some by the first names in Germany.

Versuch einer pragmatischen Geschichte der Anatomie und Physiologie, vom Jahr 1800—1825. (Historical Account of Anatomy and Physiology.) Von Dr. Burkard Eble. Wien, 1836.

A work of great research; containing a mass of information relative to the strides which anatomy, general and particular, human and comparative, has made during the first quarter of the present century. The bibliography alone would render the volume one of great value to anatomical teachers.

Das Blut in mehrfacher Beziehung physiologisch und pathologisch untersucht. (Physiological and Pathological Investigations concerning the Blood.) Von Dr. Hermann Nasse. Bonn, 1836.

Untersuchungen zur Physiologie und Pathologie. (Physiological and Pathological Researches.) Von Dr. F. Nasse und Dr. H. Nasse. Hefte 1—3. Bonn, 1836.

The volume on the Blood is an elaborate treatise, full of the fruits of experimental inquiry. The other work, by father and son, is on miscellaneous subjects, appearing in successive fasciculi.

Sammlung auserlesener Abhandlungen über Kinder Krankheiten. (Select Essays on the Diseases of Children.) Von F. J. v. Mezler. Bände 1—5. Prag. 1833-6.

A very superior work to the *Analekten*, lately noticed.

Paris und die Rheingegenden. Tagebuch einer Reise im Jahre 1835. (Paris and the Rhine country; being Notes of a Tour, &c.) Von Dr. C. G. Carus. Zwei Bände. Leipzig, 1836.

We have here a very interesting ac-

* Imported by Mr. Schloss, of Great Russell-street, Bloomsbury.

count of a tour by the celebrated Carus, the comparative anatomist. His notes of his visit to Paris, where he had every advantage of mixing with all the *savans*, and of seeing every thing worthy of being seen, are, as might be expected, shrewd, intelligent, and valuable. We wish the distinguished author had crossed the Channel, and reported progress respecting medical affairs in this country: his observations, we doubt not, would have created a sensation in the professional world similar to what Von Raumer's have in society generally: no disparagement, however, to M. Carus, in comparing him with the Berlin professor of history, whom we do not estimate at any high rate.

De Retina Observationes Anatomico-pathologicæ. (Anat. Phys. Observations on the Retina.) Auctore B. C. R. Langenbeck, M.D. Gottingæ, 1836.

An elaborate quarto, containing a very complete account of the structure and functions of the retina. It is illustrated with plates representing various objects of comparative anatomy.

Das System der Circulation in seiner Enwicklung durch die Thierreihe und im Menschen. (The Circulation in Animals and in Man.) Von Dr. C. H. Schultz. Stuttgart und Tübingen, 1836.

Supplemente zur Lehre vom Kreislaufe. (Additions to the Doctrine of the Circulation.) Von Dr. A. F. Mayer. Hefte 1 und 2. Bonn, 1827-1836.

Further contributions on the subject of the circulation. The first is a systematic work. The others contain some further elucidations of Professor Mayer's views.

Einleitung in die technische Chemie für Jedermann. (Introduction to Practical and Popular Chemistry.) Von Dr. F. F. Runge, Professor an der Universität zu Breslau. Berlin, 1836.

Well calculated to fix the students' attention; it abounds with coloured representations of the various substances, as they are met with either in their native state, in solution, or as precipitates. The idea of presenting these to the eye by means of slips of coloured cloth pasted on the page, has, we believe, been borrowed from Dr. Thomson of Glasgow.

Handwörterbuch der praktischen Arzneimittellehre. (Dictionary of Practical Materia Medica.) Von Dr. L. W. Sachs und Dr. F. P. Dulk. Theil. 1—3. Königsberg.

This promises to be a very useful work of reference: the third and last volume is not yet completed.

MEDICAL GAZETTE.

Saturday, December 10, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
Cicero.

PARENT-DUCHATELET ON PROSTITUTION.

This extraordinary work is full of interest, both for the medical and general public: its details are of a nature calculated to explode many errors, as well as to establish many valuable facts. We shall endeavour to give something like a summary view of it to the reader, who may not have leisure to peruse it for himself.

What is to be done with prostitution in a state? This is a question which has often puzzled legislators. To suppress it as an evil may have been a well-intentioned project in the infancy of society; but the time has long gone by since the possibility of such a scheme was dreamt of. Under the most ancient governments, public women were permitted; and, in Rome, all such persons were obliged, on pain of banishment, to have themselves registered by the ediles. Modern Rome has long followed the example of its venerable mother, and the system of inscription has been practised there with much regularity from an early date. Even in this country, when Rome had so much influence over our religion and

morals, licenses used to be granted systematically to the keepers of brothels, and the higher ecclesiastics derived no inconsiderable portion of their revenues from that polluted source. At present it is well known how lax are our regulations in this respect—no cognizance whatever being taken of those who pursue prostitution as a trade, unless they happen to attract attention by some infraction of social order; while our French neighbours possess the most regular system in the world respecting these matters, and, in fact, have become the envy and the model of several European states. Which policy is the better, the relaxed or the strict—that which prevails amongst us, or that amongst the French—may be made a question: but we believe there can be little doubt that, with all their strictness and discipline, there is far more libertinism and profligacy in the French metropolis than in the British.

Startling assertions have been sometimes made relative to the prodigious number of prostitutes in London: it is not long since a demi-official report in the newspapers stated *forty thousand* to be somewhat about the mark. But a hint or two from Parent-Duchatelet will show us the vagueness which usually attends those round-number calculations. In Paris itself, it appears that until recently it has been the common practice to make similar exaggerations. Twenty, thirty, nay *sixty* thousand, has been stated as about the number of *filles publiques* in that metropolis. Writers in the political journals, whether for or against the administration, assumed *ad libitum* whatever estimate seemed to them most probable, or perhaps suitable to their purpose; and even persons who, from their connexion with the government, had means of access to more exact information, have commonly talked of *eighteen* or *twenty* thousand. Now what thinks the reader is the actual number? Duchatelet states it precisely. He transcribed into his volumes the entries in the registries of the police, made regularly month by month for twenty-one years (from 1812 to 1832), and not until the year 1829 does the number of prostitutes in Paris reach 3000; and the greatest number is that entered in 1832, namely, 3617! So much for the value of approximations—such as we very much suspect those to be, which assert that there are twenty, thirty, or forty thousand public women in London. Figures, like facts, are stubborn things.

The system of registering prostitutes can scarcely be said to be of long standing in France: it is only, indeed, of late years that it has been practised in such a manner as to attract general approbation. The first suggestion relative to inscribing the *names* in the police registers was made not earlier than 1765, and it was some years later (1771) that an individual presented a memorial to government, on the propriety of taking cognizance of the *health* of those inscribed. The commission which was charged with the consideration of this project, reported—"that the suggestion regarding a *surveillance sanitaire* was the dream of a benevolent man, but that it was wholly impracticable."

A mode of registering of some sort was adopted previous to the revolution, but it was clogged with gross abuses. The women were inscribed, and taxed, and visited; but the official people—nay, the medical men—whose duty it was to make the requisite inspections, derived a vile pecuniary profit from the opportunities which their situation afforded them.

Since 1804 the administration of police has taken under its own charge both the sanitary visits and the inscriptions; and much order and regularity

have prevailed in consequence. Registers kept with extreme care, now exhibit at one view both the numbers and state of health of the women inscribed. Nor is this all: in 1828 another important arrangement was made: the certificate of birth has been rendered necessary,—so that the exact age of every female on the books is known. This latter regulation is attended with much advantage; for very few of the applicants being provided with their *actes de naissance*, a communication with the local authorities is requisite, whereby overtures are occasionally made for restoring some of the unfortunate females to their friends.

It may probably be said that there are more prostitutes in Paris than those on the books of the police. That we shall not gainsay; but the number cannot be very considerable. The police have their eye on all whom they suspect as *insoumises*, and the moment they catch them in any overt proceeding connected with prostitution, they put them immediately under arrest, and enter them in the registers as a matter of course.

On the causes leading to this degraded condition of life the author makes several sound reflections. He notices all the more ordinary inducements that operate on weak minds — the love of variety, of finery, of *gourmandise*, &c.; he comments on the neglect of education —the selfishness and cruelty of parents among the lower ranks of society: but he goes deeper towards the root of the evil—he points to the deplorable disarrangement which prevails in society, whereby females are left a prey to idleness—most of those occupations which would suit them being engrossed by men. "Is it not disgusting," says Parent-Duchatelet, "to see, in our shops and coffee-houses, so many *men* in the vigour of their age leading such effeminate lives, with scarcely any other employment than that of wiping vessels, or handling rags?" Rousseau long since pointed out this anomaly, and some of our ablest English writers have also denounced it. Fashion, however, which is omnipotent in these matters, must have its way; and *men*-milliners must be forthcoming, at whatever cost.

Some most singular facts are mentioned with regard to the motives which occasionally lead to prostitution. Any other authority would be scarcely credible; but full credit cannot but be accorded to Duchatelet, — martyr as he proved himself in the cause of truth. He assures us of several instances having come to his knowledge of women being led to prostitution through a *virtuous* or moral motive, urged, however, by distress. "Il n'est pas rare," says he, "de voir des femmes mariées, abandonées ou privées de leur mari, et par conséquent de tout soutien, devenir prostituées dans l'unique dessein de ne pas laisser mourir de faim une famille nombreuse; il est plus commun encore de trouver de jeunes filles, qui ne pouvant trouver dans le travail les moyens de pourvoir aux besoins de leur parens vieux et infirmes, font le soir le métier de prostituées, pour completer ce qui leur manque; j'ai trouvé trop souvent des notes particulières sur ces deux classes de prostituées, pour n'être pas convaincu qu'elle est à Paris plus nombreuse qu'on ne pourrait le croire."

These persons belong to that class called *filles isolées*, and could never endure the sort of life which is led by those belonging to the *maisons publiques*. Of the manners and habits of the latter class, as well as of the *dames de maison*, and of all those employed about them, we have such a picture as could not well be imagined, without being surveyed. Only fancy a separate

world of people, with an aristocracy, a middle class, and a populace: the people, too, governed by rulers whose authority knows no bounds—who, in the pursuit of a traffic a hundred times worse than the slave-trade, reduce their unhappy subjects to the most degrading occupations, to a condition comparable only with that of brutes, did not the hideous immorality accompanying it render such a comparison but too flattering. Such is the tyranny of those (so called) *dames de maison.*

Under the sway of these despots, the lives led by their victims is, as may be imagined, wretched beyond description. Obliged to prowl about the streets, or wander in the fields for hours, exposed to all kinds of weather, they are thrust, towards the end of the night, into some miserable corner, where the only resource for many of them is to forget their wretchedness in the most disgusting intoxication.

What, it may be asked, is the end of all this? What becomes of those unfortunates in their latter days? The common opinion is, that once they have plunged into their headlong career, retreat is impossible — that they soon reach the bottom of the abyss: that they all die in the hospitals, eaten up with disease. This, however—and there is some relief in the knowledge of the fact—happens to be a mistake. Prostitution, to use the language of Duchatelet, is but an *episode* in the life of the majority of those women; they, in general, only pursue the trade for a certain number of years, after which they contrive to live as other people do. Some return to their parents or relatives; others form connexions with old *célibataires*—sometimes with artisans of the lowest classes. A great many of them obtain situations as servants; some marry, occasionally even with men of rank; others, in fine, but they are comparatively few, retire with a competency, which they have saved up by strict economy—a thing which certainly can never happen to those under the direction of the *dames de maison.*

Here we shall close this summary sketch. We have only touched on some of the more general topics treated in the volumes: we have said nothing of the punishments, the prisons, the houses of correction and refuge, nor of the valuable suggestions offered by the author on these and a multitude of other points. When next we notice the work, as we hope to do ere long, we shall be more strictly professional; for there are a number of interesting subjects scattered through the volumes in connexion with the statistics of disease, with which we should like to make our readers acquainted.

WAKLEY AND HIS "ACT."

The Lancet of last week presented a laughable exhibition — Wakley's attempt to write fine and be genteel! It reminded us for all the world of Jack Falstaff's determination, in future to "purge and live cleanly," as a gentleman ought to do.

But the explanation of the phenomenon is easy. Wakley is desperately sore about that unfortunate bantling of his: he sees all its faults well enough; yet, fathered as he is with it, what can he do but endeavour to back it up?

In his quandary he sends a parcel of *fishing* letters to his correspondents—those especially that he can depend upon—just to ask them "How does my Act work?" Of course they answer by return of post that it works *beautifully.* Any one that was not blinded by a parent's foolish fondness, would see, however, that among the replies he received, and which he publishes as an answer to us, there was scarcely one which offered even the shadow of a fact. We said there were many medical men

who had been unable to obtain their fees under the Act; and we believe so still.

No fishing letters have been written by *us* to our correspondents: yet we have got facts as many as we want. "Chirurgus" was a difficult nut for Mr. Wakley to crack: yet perhaps the gentleman whom we have now the honour to introduce to him will not prove a less stubborn witness against the mischiefs of his bungling legislation. We shall not blunt the force of our correspondent's letter by any comment of our own—at least for the present.

To the Editor of the Medical Gazette.

Sir,

The following facts, I think, will shew the total inefficacy of the act for remunerating medical witnesses, and that where it ought, if possible, to have worked well, a medical man being the coroner.

I was sent for to see a person, who when I arrived was dead. I found, upon inquiry, that she had miscarried the previous day. A half-pint bottle, in which there had been turpentine, was in the room. From this and other circumstances I thought it was a case in which some legal steps ought to be taken to inquire as to the cause of death. Upon acquainting the magistrates, they were of my opinion, and ordered the coroner (Mr. Ferrier, a surgeon) to hold an inquest. This gentleman accordingly requested a surgeon, a friend of his, to make a post-mortem examination of the body, and summoned me to attend the inquest, at which he held forth very learnedly, favoured the jury with a long harangue about the treatment of tape-worm by turpentine, and stated that a large dose of turpentine had the same effect upon the system as small and repeated doses had. After the inquest he refused to give me an order for payment, stating as his reason that I had not a *special summons!* I then appealed to the magistrates, who told me that they had no power to make him do it.

If Mr. Wakley really intends to amend the act, he had better insert a clause preventing medical men being coroners, as it gives them an opportunity of forwarding the interest of their friends, and gratifying private pique in their public capacity, which in this case most decidedly has been done.

I am, sir,
Your obedient servant,
Chas. C. Aldred.

Yarmouth, Norfolk,
Dec. 3, 1836.

TRIBUTE TO SIR CHARLES BELL.

A very handsome, richly ornamented, silver urn has been presented to Sir Charles Bell by some (a hundred and thirty) of his professional brethren, on the occasion of his leaving London to take up his abode in the northern metropolis. We are requested to state, that any of the subscribers may view it at the makers, Messrs. Storr and Mortimer, Bond-street, where it will remain till the 20th instant.

LEGAL MEDICINE.

[We have thought the following trial and inquest worth preserving: the first on a subject, not certainly of rare occurrence, but requiring the most careful attention on the part of medical witnesses; the second curious, and exemplifying the mischief that may arise from the use of unsound food. The poison was probably generated in the bacon, by a sort of decomposition similar to what has been sometimes observed to take place in German sausages.—Ed. Gaz.]

INFANTICIDE — CONCEALMENT OF THE BIRTH.

At the Old Bailey, on Friday last week, Jane Hale, spinster, aged 18, was indicted for the wilful murder of her male infant child, by suffocation; and in another count in the indictment the prisoner was charged with inflicting certain wounds with a sharp instrument on the neck of the infant, by which its death was occasioned.

Mr. Bodkin stated the case to the jury.

Elizabeth Seymour deposed, that she was nurse in the family of a lady named Jeffrey, who resided at Stoke Newington. The prisoner was servant of all work in the same family, and had lived there for about six months prior to the present charge. In consequence of her altered appearance, witness had several times taxed her with being pregnant, but she denied it. On the morning of the 19th of November she complained of illness, and

went up stairs to her bed-room. Witness informed Mrs. Jeffrey of the circumstance, and subsequently went to the prisoner's bed-room, and found her packing up her clothes, her mistress having given her warning to leave her service that day. Witness went to her bed-room again after some interval, and found the prisoner in the same position as before, and she then observed some stains upon the floor. She told the prisoner that her mistress had gone to fetch Mr. Drayton, the surgeon, when she replied that she did not want him.

Mrs. Sarah Jeffrey corroborated the chief part of this testimony.

Cross-examined.—The prisoner, while in her service, bore a good character for humanity and kindness of disposition.

Mr. G. B. Drayton, a surgeon, residing at Stoke Newington, proved that on the morning of the 19th of November last he was called upon to attend the prisoner, and found her in her room quite dressed, packing up some things in her box. She said she was preparing to go away, and that she was then quite well. After some conversation with her he proceeded to examine her, and found that she had lately been delivered of a child. She denied it; upon which witness said he was convinced of the fact, and if she did not tell him where the child was he should call the police. She hesitated a few minutes, and then said, "It is under the bed." Witness lifted up the bed-clothes, and found a bundle tied up in a woollen covering. On removing the wrapper, he found a second covering of linen; and having also removed that, he discovered the head and face of a child. On examining the neck he observed a cut, and asked the prisoner how she could have been guilty of such a disgraceful act. She made no reply. Witness then sent for the police, and they took possession of the child's body; upon examining which, they found it still warm, and the limbs flexible;—and, from the appearances which the body presented, it appeared to have been dead about half an hour. Witness then told the prisoner that she would save the police much trouble if she would point out the instrument with which she had inflicted the wound on the neck of the child. She then pointed to a knife, and witness observed some spots of blood upon the blade. On the following Monday, witness and Mr. Robinson, another surgeon, examined the body. The witness then proceeded at considerable length to describe the appearances it presented; and the substance of his evidence with regard to the cut on the throat was, that it would not have been sufficient to cause death. The lungs were remarkably small, and of a purple colour, and from their appearance he was of opinion that the child had not breathed atmospheric air; but upon testing the lungs, by placing them in water, he found that they floated, and upon cutting them a slight oozing of air took place, which caused him to alter his opinion; and, from all the circumstances in the present case, he should say that the child was born alive, and that the marks of violence which he found, with the exception of the bruise on the head, were not sufficient to produce death. The contusion on the head might have taken place by a fall on the floor at the moment of birth. The wound on the throat was quite superficial. When an infant at its birth breathed freely, the lungs entirely filled out the cavity of the chest, and they were of a bright red colour, which was not the case in the present instance.

The case being closed for the prosecution,

Lord Denman said that the two great questions in the case were, first, as to whether the child was born alive; and secondly, if so, whether the prisoner had wilfully caused its death. He deemed it right, in this stage of the inquiry, to tell the jury that both questions appeared to be involved in so much doubt, that the bench were of opinion that the evidence was not sufficient to support the charge of murder; and unless the jury entertained a different opinion, and were desirous to hear a further discussion upon the points in question, it would be useless to proceed further as regarded the more serious offence. There could be no doubt, however, but that the prisoner had been guilty of concealing the birth of the child.

The jury intimated to his Lordship that in their opinion the charge of *murder* could not be sustained.

Mr. Carrington said, that he was much indebted to his Lordship for relieving him from a most anxious and painful duty—that of addressing the jury on behalf of the unfortunate prisoner, on a charge affecting her life, and he was willing at once to admit that the evidence had fully established the minor offence, that of *concealing the birth.*

A witness was then called, with whom the prisoner lived for three years, and who gave her an excellent character.

The jury, under his Lordship's direction, returned a verdict of *Not Guilty* of the murder, but *Guilty* of concealing the birth of the child.

The prisoner was then called up for judgment, and,

The Recorder proceeded to pass sentence upon her, observing that the learned persons who had tried the case had instructed him to inflict the fullest punishment the law attached to the offence of which she had been found guilty; and of the justice of the verdict every person who heard the case must be perfectly satisfied. As the organ and instrument of the Court, he was therefore called upon to sentence her to a confinement of two years, with hard labour, in the House of Correction; but the hard labour would not be added to the sentence until her state of health allowed it. It was needless for him to recal to her mind the suspicions and alarming facts disclosed upon the trial; but he must observe, that the circumstances which came out in evidence furnished at least probable grounds for believing that she had meditated, if not actually perpetrated, the murder of her helpless child.

POISONING WITH UNSOUND BACON.

An inquest was held at Westminster Hospital on Monday last upon the body of Caroline Jones, who came by her death under the following circumstances:—Considerable interest was excited in consequence of a prevalent rumour that the deceased had been poisoned by some of the bacon which became impregnated with arsenic on the occasion of the late fire at Fenning's wharf, London-bridge.

Richard Jones, of No. 8, Franklin's-row, Lower Chelsea, messenger to His Majesty's commissioners of Tithe-inquiry, deposed that the deceased was his daughter, and nearly 15 years of age. Her health had been always good from her infancy up to Sunday seven weeks ago. On the preceding evening, Saturday, 15th October, witness and his wife bought a piece of bacon at a shop opposite the Chelsea bun-house. The bacon was labelled 4d. per lb. It looked very good, and the shopman persuaded witness to buy 8½lb. at a reduced price, warranting it to be good. It was cooked the next day, with greens. The whole family dined together, the deceased eating very heartily of the lean part of the bacon. During dinner, witness remarked a peculiar flavour in the bacon. It disagreed with him, and he ate very little of the fat, and none of the lean. Soon after dinner, he felt a burning sensation in his throat, and a disposition to vomit. About an hour after dinner, his son, who was afflicted with the St. Vitus's dance, was taken ill, and seized with pains and vomiting. The servant had gone out with a younger child, and returned about five o'clock, complaining of dreadful headache, and burning at her stomach. Witness gave her some tea, when she went to bed, and was attacked violently with spasms and retching, but nothing came off her stomach. Whilst witness was attending the deceased, another child, aged 8 years, was attacked in precisely a similar way. There were two other children, who had not partaken of the bacon, and they were not affected with any illness. Witness went to a druggist's shop, and procured calomel pills, of which he gave three grains to each of the sick children and their mother, and took five grains himself. The deceased continued ill for several days, and in a fortnight a medical gentleman was brought in, but as she grew worse, in the course of a week she was removed to the hospital, where she died on Friday last. Every one of the family who had tasted of the bacon was affected in the same way as the deceased, but not so seriously. Witness did not show the bacon to the doctor: he threw it down the water-closet. He had observed black spots upon it before he threw it away. Immediately upon finding the ill effects of it after dinner, he cut it open, and, besides the black spots, he particularly observed that it had a nauseous heavy smell, but very unlike that of putrid meat. He could liken the taste to nothing but that of sugar of lead.

Witness acknowledged that he was wrong in not calling in medical advice sooner, but he hoped that the purging produced by the calomel would have cured them all. He had heard of other families in Chelsea being made ill by eating bad bacon.

Mr. John Thomas, surgeon to the hospital (?), stated that the deceased was admitted on the 8th November, suffering very severe pains in the abdomen, and excessive purging. For about three weeks she seemed to be recovering; but after that she became worse, and died on Friday last. Upon the post-mortem examination, great ulceration of the stomach was observed, which was the immediate cause of death. The friends of the deceased had said nothing about the supposed cause of her illness until about three days before her death. The symptoms might have been produced by other causes than the taking of deleterious matter into the stomach; but witness was inclined to believe, from the evidence which he had heard given by the deceased's parents, that the bacon was the cause of the illness, and consequently of the death. Tainted or diseased meat would produce symptoms similar to those which the deceased exhibited. They might also have been produced by some mineral poison.

Mr. Keen, cheesemonger, of Grosvenor-

Row stated that the bacon, sold to Mr. Jones was bought of Messrs. Parry and Beazley, Holborn-hill, and he had never heard of any complaint about it until this day. The bacon had certainly not come from Fenning's wharf. He had sold all the better parts at 10d. and 11d. per pound, and he was glad to dispose of the inferior parts at a low price.

John Brown, clerk to Messrs. Parry and Beazley, produced the invoice of the bacon sold by them to Mr. Keen. There was no part of the bacon diseased or tainted. It had not come from Fenning's wharf. He attributed the black spots spoken of by Jones to bruises.

The jury, after consulting for about twenty minutes, came to a unanimous verdict, that the "Death of the deceased was caused by eating unwholesome bacon, but that no blame was attached to the vendor *."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Abstract of a Paper in the forthcoming Transactions, entitled "RESEARCHES *on some Points of the* PATHOLOGY *of* PULMONARY TUBERCLE. BY PETER NUGENT KINGSTON, M.D., Physician to the St. George's and St. James's Dispensary."

THE object of this paper is to shew, 1st, that the common pulmonary tubercle is a vascular texture; 2dly, that it sometimes originates in an alteration of the air-cells and their secretions; and 3dly, that now and then the disease is entirely healed, when it has even extended over a very large portion of the lungs.

I.—The opinion that pulmonary tubercles are destitute of nutrient vessels, and consequently of all the properties of organization, has prevailed since the time of Stark. The principal ground on which it rests is, that they cannot be injected from the vessels of the lungs. But here it is assumed that no vessels can be so minute, even in the most delicately organized parts, as not to admit and be brought into view by the fluids employed for anatomical injection, which is contrary to the opinions of many of our best anatomists and pathologists, and is irreconcileable with the fact, that the articular cartilages, when inflamed, exhibit red vessels, which, in the healthy state, are impermeable by injections. The injection of pulmonary tubercles has not, however, been fairly tried, for the fluid has been thrown only into the pulmonary arteries and veins; whereas, those parts of the pulmonary structure which are impervious to air being nourished exclusively by the bronchial arteries and veins, it may be inferred that with these alone are the nutrient vessels of the tubercles connected, and that by the bronchial arteries alone can their injection be attempted with any reasonable hope of success.

The author then gives an analysis of seven cases of pulmonary tubercles possessing the ordinary appearance, and having during life given rise to the ordinary symptoms. On careful section, the interior, both of those which were yellow and opaque, and of those which were greyish and translucent, was distinctly seen to be traversed by red vessels, often of considerable length, making frequent ramifications and anastomoses, sometimes extending from the centre of the tubercle to its circumference, where they communicated with the vessels of the lungs.

If the vascularity of the common pulmonary tubercle be admitted, there is no longer any difficulty in explaining the changes of colour and consistence which take place in its interior during the several stages of its progress, and the frequent commencement of these changes in the centre; whereas, under the supposition that it is destitute of organization, these phenomena are inexplicable, or at least have received no explanation generally satisfactory to the profession.

II.—It was held by certain authors, nearly a century ago, that pulmonary tubercles sometimes consist of air-cells distended with morbid secretion, which has gradually solidified and acquired the various appearances presented by tubercles in their several forms and stages. During the last twenty years, observations in support of this opinion have been brought forward, first by Magendie and Cruveilhier, and since by Andral and Dr. Carswell. But the evidence is still considered by many as incomplete, and as needing addition and support from further investigations.

Dr. Kingston then relates cases in which the following series of appearances were observed in portions of the same lung.

1. Excavations at the apices of the lobes.

2. Bodies having the ordinary characters of miliary, crude, and softened tubercles.

3. Bodies which, to the eye and touch, scarcely differed from the preceding, but upon close examination were found to be

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* Both cases slightly condensed from the *Times'* report.

membranes filled with viscid mucus, to be continuous with the bronchi, and hence to be portions of the air-passages.

4. Bodies forming a transition between the third and fourth groups.

There appears no room for doubt that these were but different stages of the same disease; and hence it may be inferred that the tubercles originated in a thickening and distension of the air-cells; that the parietes of the latter continued to thicken, and their contents gradually solidified, till at last a total obliteration of their cavity was effected, and there resulted a number of solid, white or grey, more or less opaque bodies, frequently of rounded form, such as have received the appellations of miliary tubercles and miliary granulations.

This conclusion throws light upon several practical questions; in particular, it confirms the opinion of those who, while they allow the necessity of a predisposition, think that a lingering inflammation, or long-continued irritation of the air-cells, and minute bronchi, excite the disease in many who, though the diathesis existed, would otherwise have escaped.

III. — A few cases have lately been brought forward by Laennec and Andral to shew that, where a very small number of pulmonary tubercles exist, they are occasionally healed.

Dr. Kingston relates a case in which a tuberculous affection had been entirely healed, after having disorganized the whole of one lung, and a fourth part of the other. One lung consisted of little more than a congeries of excavations, all lined with healthy membrane, free from tuberculous and purulent matter, and inclosed by a thin lamina of condensed pulmonary structure. A fourth part of the other was taken up with hard carbonaceous masses, some of which were encysted, and a few contained in the centre a little yellow, opaque, dry, friable tuberculous matter. In each lung there were besides a very few encysted, withered tubercles, sufficiently indicating the nature of the lesion which had produced the excavations. The man first came into St. George's Hospital for a severe wound on the leg, from the kick of a horse. Of this he was perfectly cured in about four months. He came in a second time with inflammation of both kidneys, from getting wet. By this, and a supervening affection of the head, he was carried off in twelve days. During the periods of his stay in the hospital, an occasional fit of coughing, with expectoration, occurred in foggy weather, but there were no habitual chest complaints of any kind.

The healing of a tuberculous affection of the lungs, so extensive as this, has no parallel on record, and had not, even by Laennec, been contemplated as possible.

OBSERVATIONS ON THE NATURE AND TREATMENT OF GANGLION.

By Mr. Aston Key.

The power which tendons have of forming bursal cysts, when they are exposed to extraordinary pressure or friction, is one among the many resources possessed by organized structures, to prevent the occurrence, as well as the consequences, of inflammation. It would seem that ganglia are not merely diseased bursæ mucosæ; for the former are found in parts where, in a state of health, bursæ do not exist. I look upon them as new structures, formed upon tendons, as pressure or friction, or undue exercise of a part, may call them forth. On the patella the presence of a bursa is accidental: it is not always met with in dissection; and probably its formation may depend on the exertion which the ligamentum patellæ has to undergo, or on the pressure which it may have to sustain, in the frequent act of kneeling. The contents of a ganglionic tumor differ from those of a common bursa mucosa. The latter secretes a fluid like ordinary synovia, for the purpose of lubricating the tendon: the ganglion most usually contains a substance like the outer layers of the crystalline lens, soft, viscid, and nearly solid. These crystalline ganglia, as they might not improperly be called, are frequently formed about the hand, especially on the extensor tendons, as they pass over the carpal bones; less frequently on the lower part of the theca containing the flexor tendons of the fingers, forming small but sensitive swellings near the metacarpus. They also are occasionally seen on the extensor tendons of the fingers where they pass over the joints, giving pain, and accompanied by a great sense of weakness in the part.

These crystalline ganglia are formed, as I have said, on the tendinous structure, and appear to consist of a double bag: the outer one tendinous and firm; the inner, like a synovial membrane, thin and secreting. In one that I examined on the tendon of the external gastrocnemius muscle, this double bag was distinctly seen. In most instances, the outer cyst cannot be separated from the inner; the whole seem-

ing to be made up of one fibrous bag, secreting on its inner surface.

The treatment usually adopted for those situated on the back of the wrist-joint, is, to burst the cyst by a sharp blow with a book or any other hard body. If well aimed and sharply struck, it often effects the object of breaking it down; but it as frequently fails, either from the firmness of the cyst or from the unskilfulness of the blow, or from want of sufficient resistance afforded by the wrist. It is also a painful remedy, and is occasionally productive of more subsequent inconvenience than the ganglion had occasioned. The more simple plan is, that of making a small puncture with the point of a lancet; or a cataract needle, when the tumor is small. There is no fear to be entertained of inflammation taking place; as the cyst is little disposed to inflame, and the closure of the opening, after the contents have escaped, by means of a band or piece of plaster, is a sufficient guard against its occurrence. I have never seen or known any mischief to arise from the operation of puncturing these ganglia; and their return is equally prevented as by any other mode of treatment.

For the small tumors that occupy the base of the palmar side of the fingers, the puncture is the only remedy. Blisters or blows are ineffectual: the former are very slow in operating, and rarely succeed in removing them; and blows cannot be struck with sufficient accuracy to ensure a rupture of the cyst. The cataract needle is the most convenient remedy: the tumor being sensitive, the patient experiences some pain in its introduction; but it is momentary, and the relief afforded is complete.

When the swelling is situated over the back of a joint on the extensor tendon, pressure should be kept up for some weeks after the evacuation of the cyst. A gentleman, who was much in the habit of writing, applied to me for a swelling of this kind on the first phalangeal joint of the right index: he complained of pain and weakness in the use of it, and was unable to employ the finger steadily in writing. A small puncture was made in it, and about a drachm of crystalline fluid escaped: a piece of ribband was bound over the joint, and firm pressure was thus made on the cyst. The fluid did not collect again; and by wearing the ribband for a few weeks, in order to secure and steady the finger when employed in writing, he regained the perfect use and strength of it.

I once punctured a similar swelling over the tendon of the trochlearis superior muscle of the eye; and it never shewed any disposition to return. Occasionally, the part that has been the seat of the ganglionic enlargement becomes thickened after its contents have been allowed to escape; and a slight hardness remains, but does not interfere with the use of the part.

The ganglion patellæ is a cyst formed upon the expanded tendon that invests the surface of the patella. Its structure resembles that of the other ganglion, having a dense fibrous covering lined by a secreting membrane. The secretion differs from that of the crystalline ganglia, in being fluid; probably in consequence of having less albumen in its composition. I need not enter particularly into the ordinary modes of managing such ganglia, when they become large or painful. Blisters, stimulating plasters, and pressure with a bandage, are often resorted to with advantage. The more effectual plan for dispersing them altogether, is, to puncture them with a lancet, to let out the contained fluid, and to employ firm pressure with a bandage and plaster. If this does not prove permanently successful, the seton becomes the most ready, the most mild, and the most effective remedy that we have at command.

I have frequently had occasion to employ this remedy for this affection of the knee; and can aver it to be milder in its effects, and in the annoyance it causes the patient, than the common blister. If a few threads be passed through a ganglion patellæ of one knee, and a blister applied to another on the opposite limb, the patient invariably, I have noticed, complains of more suffering from the blistered surface than from the suppuration caused by the seton: and this is in accordance with what we know of the sensitiveness of the skin, compared with the sensibility of a bursa, even in a state of inflammation. The pain complained of during the stage of acute inflammation is inconsiderable; and the moving the threads, during the process of suppuration, occasions but little uneasiness. Sometimes a little feverish excitement is produced by the pus not escaping freely from the apertures, which, being retained, becomes decomposed: this inconvenience is remedied by keeping the openings, where the silk enters, free and clear. The seton should be kept in for several days after suppuration is established, in order to promote granulations, and to facilitate the escape of the pus. Even where the ganglion suppurates itself, the seton may be used with advantage, towards accomplishing these two objects.

The detail of cases in which the seton was employed is unnecessary, as they resemble each other in all points of practical import. The length of time required for the complete action of the silks, and the extent of the inflammation induced

by them, may vary in different individuals. Many cases have occurred in the hospital, during the last three years, in which the seton has been effectually employed; and, on the whole, I prefer it, as being more certainly effective, and combining with such efficiency the advantage of not being severe or painful.

It is not to the ordinary ganglion patellæ alone that its use is confined. The operation of the seton is more especially adapted to the indurated ganglion. By this kind of swelling, I mean one in which, from the continued existence of inflammation, the cyst of the tumor has become exceedingly thickened by successive deposits or layers of adhesive matter or fibrine, converting the tumor into an almost solid mass.

These hardened ganglia cause great uneasiness to the subject of them; and incapacitate the person from bearing on the part in kneeling, as well as weaken the limb in the act of extension. The appearance of these tumors, when they are laid open, sufficiently indicates their manner of growth, and also the mode in which the loose bodies, resembling melon-seeds, that are often found mixed with their fluid contents, are produced.

The operation usually employed for the cure of such indurated cysts on the patella and its ligament, is excision of the entire mass. The operation is easily performed, does not involve the joint in danger, and is effective in removing the disease. When the tumor is small, the operation is quickly performed; but if it be large, and overlap the synovial membrane, a surgeon cannot divest his mind of all risk of wounding the capsular ligament, especially if the base of the cyst be adherent to the subjacent fascia; and the operation requires some cautious dissection. Fortunately, the seton is equally successful in promoting suppuration of the cyst, as it is in the smaller and soft ganglia. But the most gratifying result is the entire disappearance of the hardened coats of the cyst by absorption. The indurated parietes appear to be produced, and to be kept up, by the irritation of the bag; which being filled up by the inflammation and suppuration established by the seton, ceases to act as a cause of irritation, and the absorbents set to work for the removal of the walls of the tumor.—*Guy's Hospital Reports*, No. 3.

ON THE EMPLOYMENT OF THE SUCKING PUMP IN STRANGULATED HERNIA.

M. Koehler, in 1821, effected the reduction of a scrotal hernia, by applying a cupping-glass above it. Not having heard of the use of the pump in such cases, he did not attribute the effect produced to its true cause; but on seeing the paper of M. Busch, in Hufeland's Journal for 1832, he was induced to try this new method.

The first trial was upon a patient sixty years of age, who had laboured during nine years under scrotal hernia of the left side, which had become suddenly strangulated. He was affected with the most violent pains, and all the efforts of the surgeon to effect reduction proved abortive. Such was the state of matters on the 3d, when M. Koehler saw the patient for the first time. The hernial sac had now attained the size of an ostrich's egg; the countenance was shrunk, and expressive of great suffering; the skin covered with cold sweats; the abdomen tympanitic and hard; the pulse almost imperceptible; constipation of three' days standing; hiccough, and stercoraceous vomiting. One more, and that an ineffectual attempt, was made at effecting reduction by the taxis, when recourse was had to the exhausting pump. On the first application over the inguinal ring, borborygmus was heard within the hernial sac; and to the surprise of all, the reduction was straightway accomplished: the vomiting immediately ceased, and some hours afterwards the patient had an evacuation from the bowels. In the course of a few days the recovery was complete.

M. Koehler gives the details of six other cases of strangulated hernia, both inguinal and crural, in which the strangulation yielded to this means, after having resisted every other — an operation alone excepted. One of these, however, required considerable perseverance. A Jew mendicant, aged 62, had laboured under a scrotal hernia for twelve years, which had become strangulated in consequence of the mal-application of a bandage. When he came to the hospital the sac was as large as a child's head, and was tense, without being very sensible. He had vomited twice, and, notwithstanding the administration of clysters before his admission, he had been constipated during four days. The first application of the pump not having been attended with success, he was bled, and had large doses of calomel administered internally, while an anodyne ointment was applied to the part. No improvement being thereby effected, the pump was tried again; but it was not till its third application that some peristaltic movement became perceptible within the sac. The exhaustion was performed once more, when the reduction was immediately accomplished. The bowels acted soon after, and in a few days the patient was quite well.

Some of M. Koehler's colleagues have also used the pump, in a case of strangulated umbilical hernia, also with most satisfactory result. A woman, fifty years of age, and very corpulent, had an umbilical hernia of two years' standing, which was partially irreducible: it became strangulated, with stercoraceous vomiting and constipation of three days' duration. The tumor was as large as an orange, hard, and very sensible. All other remedies having failed, the air-pump was next tried: its application gave pain, and chafed the integuments by the traction they experienced; nevertheless the reduction was complete.

In conclusion, this method succeeded completely in twenty-three very severe cases.—*Koehler's Annalen.*

DESTRUCTION OF THE LEFT HEMISPHERE, WITHOUT AFFECTING THE INTELLECT.

M. Nobell has communicated to the *Bulletin de la Societe de Médecine* of Ghent, a case which presents considerable interest in reference to the functions of the brain.

A young man of 16, habitually grave, uncommunicative, and of obtuse intellect, thought that he had been deceived by a girl to whom he was attached, and determined, in consequence, to destroy himself. He discharged a pistol into his head, two balls from which penetrated by the same aperture at the anterior part. About two ordinary cupsful of cerebral substance were evacuated by the opening, and a catheter was introduced to the depth of four inches, without meeting with the slightest impediment. The patient, who had been at first insensible, recovered within twenty-four hours, presenting no disturbance of sensibility or power of motion: his sight, however, was gone. The wound healed favourably: a considerable quantity of cerebral matter was lost each day during the dressing, and at the end of the twenty-seventh day the wound was completely healed—neither ball having been extracted. A remarkable change had been effected in the character of the youth. He became gay, intelligent, and talkative. His vision was never restored, but his sense of smell was quite unimpaired. About six months after the accident he became subject to convulsions, which were removed by one bleeding. At the end of two years he died. The great loss of cerebral substance which this individual had suffered had occasioned no derangement of the intellectual powers, notwithstanding that the balls had penetrated very far back into the brain; and as the wound was situated at the middle of the os frontis, and beneath the left frontal protuberance—as besides, the course of the balls departed from the median line at an angle of about 15°—it is more than probable that the left lobe was destroyed.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN NOVEMBER.

William Innes, Tain, Rosshire.
John B. Samuel, New Bridge-street, Vauxhall.
J. L. Eland, King's Cliff, Northampton.
J. Barker, Coleshill.
Æmiliaus Holbeche, Sutton Coldfield.
Joseph Glover, York.
S. Tilley, Bermondsey.
T. Barrow, Co. Cavan.
W. Bell, Newry.
R. Riggs, Castle Pollard.
W. Birtwhistle, Skipton-in-Craven.
S. D. Fereday, Sedgley.
H. R. Banks, Devenport.
Richard T. Morris, Uphollam.
John Thompson, Thornton Stewart, Yorkshire.
W. Parkinson, Burnley, Lancashire.
W. H. Oliver, Rotherhithe.
M. J. M'Cormack, Dublin.
W. F. Sealy, Bombay.
Robert F. M. Low, Mallow.
J. A. Reynolds, Ballyshannon.
Thomas B. Salter, Poole, Dorset.
W. Ellis, Abergavenny.
R. Kinneir, Cricklade, Wilts.
John D. Watt, Calthorpe Place, Gray's Inn Road.
R. W. Tamplin, Billiter-street.
James Drew, Cambridge.
R. M. Rendall, Maiden Newton.
J. A. Wood, Uttoxeter.
P. Reilley, Plymouth.
J. J. Lay, Peasanhall.
S. Garrard, Blyford, Suffolk.
W. Isaacson, Mildenhall.
J. Laughnan, Tralee, Co. Kerry.
Edward Davies, Merthyr, Tydvil.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

December 8, 1836.

James Troutbeck, Congleton.
John Pearse, Tavistock.
James Bratton, Shrewsbury.
William Ellis, Rawmarsh, Rotherham.
John Joseph Pitts, Southwark.
John Marston, London.

NEW MEDICAL BOOKS.

The Fallacy of the Art of Physic, as taught in the Schools. By S. Dickson, M.D., 8vo. 7*s.*

The Principles of Surgery. By James Syme, F.R.S.E. Second edit. 8vo. 14*s.*

Cowan's Bed-side Manual, 18mo. 2*s.* 6*d.*

Lectures on the Morbid Anatomy of the Serous and Mucous Membranes. By T. Hodgkin, M.D. Vol. I, 8vo. 10*s.* 6*d.*

Pathological Researches on Phthisis. By Louis. Translated by Cowan. 8vo. 12*s.*

UNIVERSITY OF DUBLIN.

LECTURES ON ANATOMY.

To the Editor of the Medical Gazette.

SIR,

ALLOW me to request that you will have inserted in the MEDICAL GAZETTE the annexed order of the Board of Trinity College, Dublin, for the purpose of counteracting any erroneous impression that might exist as to the delivery of the anatomical course in the University of this place.—I remain, sir,

Your very obedient servant,

FRANCIS BARKER,
Registrar to the Professors.

22, Bagot-street,
Dec. 1, 1836.

(COPY.)

Trinity College, Dublin,
Nov. 26, 1836.

Ordered by the Board, that the Professor of Anatomy and Surgery shall deliver *five* lectures a week in anatomy, at the hour of one o'clock, in their Anatomical Theatre, during the medical session, from the first Monday of November to the end of April in every year; and that this order be esteemed a "bye-law," agreeably to the 26th section of the 40th Geo. III.

By order of the Board,

(Signed) ROBT. PHIPPS,
Registrar.

NORTHERN DISPENSARY.

WE are glad to learn that, at a special general meeting of the Governors of this dispensary, held on Tuesday last, the following resolution was carried by a large majority; so that there is reason to hope the evils recently complained of will be corrected, and that the prosperity of the institution will ultimately be advanced.

Resolved—"That this meeting, in considering the causes which led to the resignation of the late medical officers of this charity, is bound to acknowledge that those gentlemen resorted to the most becoming expedient to vindicate their own honour, and to arouse the attention of the governors to the danger which threatened the existence of the institution.

"That this meeting has heard with regret, that the representations made to the Committee of the causes which led to their resignations, did not induce the Committee to adopt decisive measures for the protection of the charity; and this meeting considers it due to the medical officers making these representations, to thank them for their praiseworthy efforts to maintain the usefulness of the charity, and request that they will resume their several offices."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 10, 1836.

Abscess	4	Brain	12
Age and Debility	145	Lungs and Pleura	22
Apoplexy	22	Insanity	19
Asthma	45	Jaundice	8
Cancer	7	Liver, diseased	8
Childbirth	13	Locked Jaw	3
Cholera	2	Measles	39
Consumption	221	Miscarriage	2
Convulsions	87	Mortification	9
Croup	2	Paralysis	17
Dentition or Teething	26	Rheumatism	3
Dropsy	50	Scrofula	3
Dropsy on the Brain	26	Small-pox	37
Dropsy on the Chest	3	Sore Throat and Quinsey	2
Dysentery	4	Spasms	4
Epilepsy	2	Stone & Gravel	1
Erysipelas	5	Stricture	2
Fever	31	Thrush	2
Fever, Scarlet	25	Tumor	3
Fever, Typhus	5	Venereal	2
Gout	4	Worms	4
Heart, diseased	9	Unknown Causes	43
Hernia	2		
Hooping Cough	24	Casualties	33
Inflammation	127		
Bowels & Stomach	56		

Increase of Burials, as compared with the preceding week . . } 971

*** The increase in this week's bill has arisen from several clerks of large parishes, who had neglected to make their reports in due order, having now made reports previous to the close of the year, for insertion in the General Bill.

METEOROLOGICAL JOURNAL.

Dec. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 1	from 29	to 43	29·84	to 30 03
Friday . . 2	35	52	29·97	29 75
Saturday . 3	45	53	29 64	29·80
Sunday . . 4	48	56	29·73	29 78
Monday . . 5	46	56	29·77	29·77
Tuesday . . 6	41	55	29·77	29·85
Wednesday 7	46	51	29·51	29·49

Wind S.W., and occasionally boisterous.
Generally overcast, with daily rain.
Rain fallen, ·575 of an inch.

NOTICES.

"S.," a Hahnemannite, who calls upon us "to confirm or refute" the statements of one Simon, had better tell us, in the first place, who the said Simon is: he may be a lineal descendant of Simon Magus for aught we know. Then we should wish to be informed who are Bakody, Stutter, Seider, &c. whom Simon quotes. It is a question of evidence; and "S.'s" is of the worst *hearsay* description we have lately met with. *We* quote none but Hahnemann himself, and the disciples whom he vouches for in his books.

"R." shall be attended to.

"E. C. P." should give his name, as the "Old Navy Surgeon" has, long since.

Communications have been received from Dr. Ashwell, Mr. Noble, Dr. Kemp, Mr. H. L. Smith, Mr. Pritchard, Mr. Hulbert, "Z.," "Hibernicus."

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 17, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XII.

Medico-legal illustrations of Rape—German and Italian cases—Analysis of the celebrated Thornton and Ashford trial—The prosecutor's statement and prisoner's defence, how far borne out by the circumstances—The medical evidence, with remarks—General evidence—The alibi—Probable cause of Mary Ashford's death—Margaret Patterson's case—Violation with horrible cruelty— Stupra contra naturam—*A few remarks on unnatural crimes, and the extent of proof of which they admit.*

The medico-legal report with which I closed the last lecture, seemed well adapted for an illustration. It served to show the systematic careful method usually pursued by French medical jurists, investigating a case of alleged rape; and so well does every point seem to have been attended to in that instance, that there appears, indeed, to be nothing left to desire. The Germans, also, have their regular forms for reporting in rape and other cases, and I could have wished to present you with a specimen of their mode of proceeding; but I find that the examples supplied us, even by some of the most recent authorities (Dr. Bernt, for instance, who brought out a new edition of his *Visa Reperta* only a few months ago), are somewhat musty—dated as far back as 1783 and 1791.

Italian case of alleged rape and infection.—We are indebted to Dr. Beck for the particulars of an interesting Italian case, which involved more than the mere question of violation. Signor Crespi, a young man of good family, at Rome, was charged with a rape committed on a girl under the age of puberty: he was arrested, and the girl examined by three physicians and two surgeons. The report was, "that the sexual parts were altered and tumid; that the hymen was entirely wanting, and the whole of the vagina was irritated, inflamed, and of a deep red colour—particularly so at the point of the frænulum." The vagina was dilated so as to admit a finger with perfect facility; and, finally, they observed a copious discharge of purulent and sanguinolent matters. The medical examiners were of opinion that the complainant had been deflowered recently, and that the discharge arose either from mechanical injury or actually from a communicated gonorrhœa. The girl herself stated that the discharge began *immediately* after the rape: it did not yield to the ordinary antiphlogistic treatment; and subsequent examinations by the same physicians induced them to lean more strongly to the idea that it was of venereal origin.

The accused was convicted. But Professor Metaxa took up the case, and argued two points—that there was not sufficient evidence of the rape, and that the girl laboured under leucorrhœa. Respecting the first, his position was general,—the difficulty of the proof derived from apparent absence of virginity; and it was urged that a rape committed on a female under puberty would have left more positive marks than were observed in the present case. His observations on the second point were more conclusive: he maintained that the nature of the discharge ought to have been better ascertained; gonorrhœa only affects the inferior and more external parts of the genitals, while leucorrhœa proceeds from a higher source: if the parts, therefore, had been washed carefully, and then again inspected, no mistake could have occurred. He argued further, that gonorrhœa has its regular period of high in-

flammation and decline, while leucorrhœa is often chronic, and increases and diminishes at irregular intervals. The statement that the discharge began immediately after the alleged violence, he insisted was opposed to the idea of its being venereal.

Some other circumstances mentioned in the report were also criticised by the Professor; such as the assertion that the parts were acutely inflamed, while it appears they could be handled without giving pain; and it seems there was no hæmorrhage of any kind, nor was there any account even of carunculæ myrtiformes in the absence of the hymen. Testimony was also produced that the girl did actually labour under leucorrhœa.

So strong a representation of all these facts and inferences was presented to the authorities, signed by twenty-eight other professors and physicians of Rome, that it led to a reversal of the sentence. Dr. Beck concludes his notice of the case by assenting to the shrewd observation made by a reviewer, in an American journal, that the Professor, while he certainly showed that the physicians were wrong in supposing gonorrhœa, weakened his arguments not a little by insisting so strongly on leucorrhœa; for, admitting that leucorrhœa was present, there seems to have been quite enough of indicia of violence observed about the sexual organs to warrant the probability of rape. Signor Crespi must, therefore, be considered as having escaped through the remissness of the examiners in ascertaining a collateral point of testimony.

The celebrated Warwickshire trial—Thornton and Ashford case.—I shall now beg to call your attention to a very celebrated English case, which created an intense interest in the public mind about nineteen years ago, and some of the circumstances connected with which have not to this hour been explained. A young woman was found drowned, with recent marks of defloration on her body. Suspicion of rape and murder alighted on a man who had been seen in her company only a few hours before her death, and who acknowledged afterwards that he had had connexion with her: he was indicted and tried for both crimes, but acquitted—the evidence not satisfying the minds of either judge or jury.

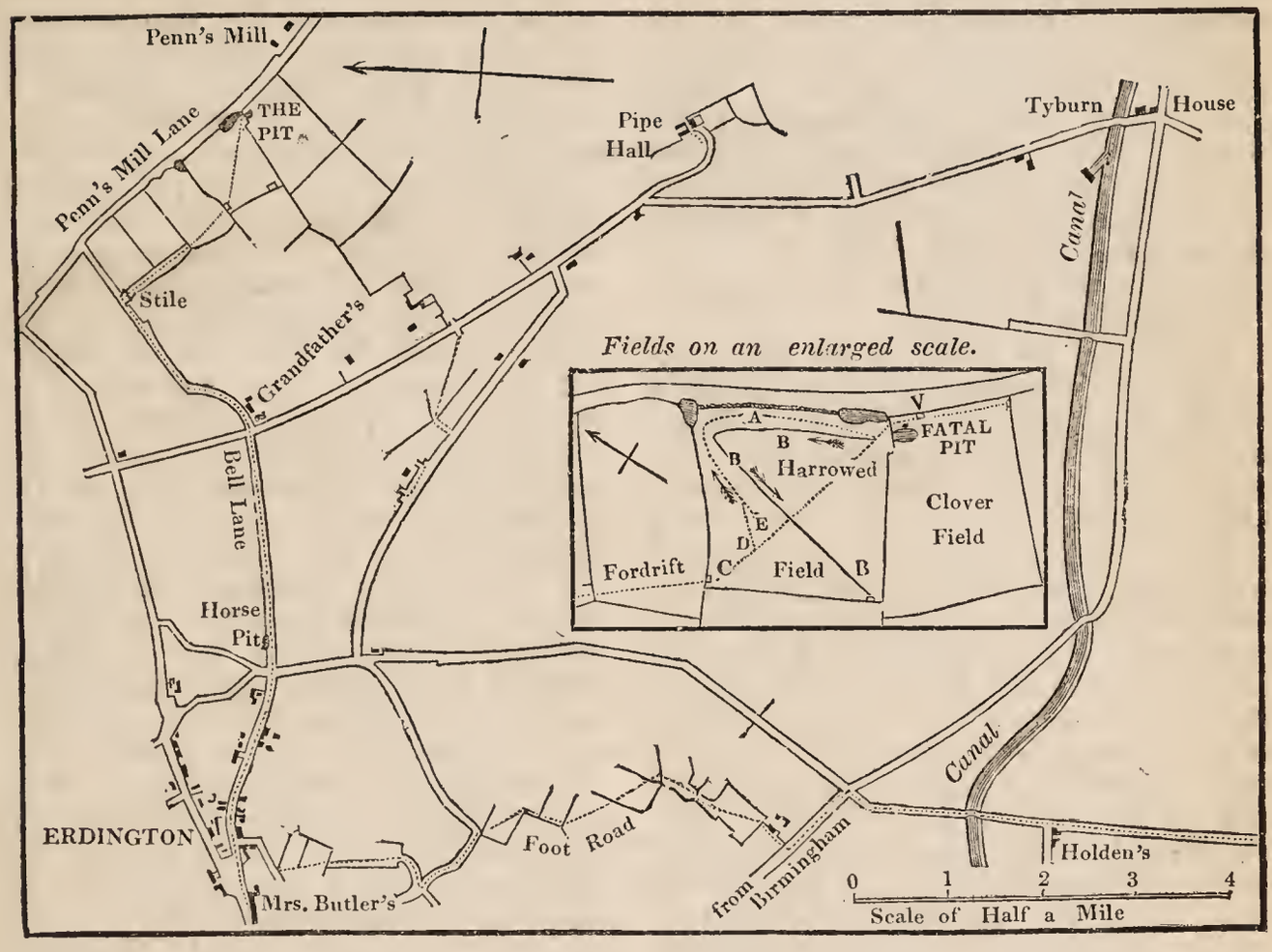
The popular voice, however, pronounced Thornton, the accused, guilty, and his escape from condign punishment was attributed to the mere technicalities of the law. A second trial was loudly called for; and it appears that, according to certain ancient statutes, the nearest of kin of the deceased had a right to *appeal*. The brother of the deceased was, in this instance, induced to appeal; whereupon the appellee claimed a *trial by battel*. It was gravely argued in the Court of King's Bench, whether this sort of trial should be permitted. The proceedings occupied several months. Battel was ultimately granted, but declined by the appellant; whereupon the prisoner was permitted to go at large.

Let us review the principal circumstances of this case, for they are worthy of our best attention. I shall take, in the first place, the statement of the prosecutor's counsel, as it will serve to represent the popular side of the story. We shall then compare with it the prisoner's statement, and see how far each was borne out by the evidence.

Prosecutor's statement.—After the usual preliminaries about the heinousness of the crimes with which the prisoner, Abraham Thornton, was charged, counsel proceeded. The deceased, Mary Ashford, was a young woman of engaging manners, handsome in her person, and of unblemished character. She was well known in that part of the country—that is, at Erdington, and in the neighbourhood; her parents were poor, and she lived with her uncle, a farmer at Langley. On the evening of the 26th May, 1817, the deceased went with her friend, a young woman of the name of Hannah Cox, to a dance at a public-house in the vicinity of Castle Bromwich, called Tyburn-house. Thornton was there, and was much struck with her appearance: he inquired who she was, and on being told it was old Ashford's daughter, he said, "I have been connected with her sister, and I will with her, or I'll die by it." He danced with her in the course of the evening, and about twelve o'clock, when she left the house for the purpose of returning home, he accompanied her. Hannah Cox also went part of the way with them; but after she parted, there is no account of prisoner and deceased till three o'clock in the morning. At that hour a man saw them sitting together on a stile, when Mary Ashford appeared anxious not to be recognized. At four o'clock she called at Mrs. Butler's, where Hannah Cox slept. There she changed her white dancing dress for the red spencer, pink frock, and black stockings, which she had worn the day before, put her other things in a bundle, and left for home at about a quarter past four. She was in good spirits, and cheerful in talking to her friend Hannah on this occasion: said that Thornton had stopped with her a good bit; and that she had slept at her grandfather's. [This last assertion was wholly untrue.] Soon after leaving Mrs. Butler's, deceased was seen going up Bell-lane on her way home. It was at this time at least a quarter past four. At half-past six,

her bundle, her straw bonnet, and her shoes, were found beside the pit from which her body was soon after dragged; so that between a quarter past four and half past six, the murder with which the prisoner was charged must have been perpetrated.

In the harrowed field, adjoining the one in which the fatal pit is situated, were ob-



served the footsteps (D, E, A) of a man and woman. They were off the footpath (c) which led through these fields to Langley. These footmarks were those of two persons now running, now dodging, and again walking, and were found to lead to a spot (v) where there was an impression of a human figure extended on the ground. In the middle of this impression was a quantity of blood; at the bottom of the figure there was a still larger quantity; and from this to the pit traces of blood could be plainly detected. Now the footsteps in the harrowed field were evidently those of Thornton and Mary Ashford, for the shoes they wore were compared with the impressions. There was the mark, also, of a man's foot at the edge of the pit—the left foot, slanting, the outside pressing deeper than the other, as if made by a person who had leaned forward to throw something into the water. [This footmark, however, was not shown to be Thornton's.] When the body was examined by two surgeons, the proofs of defloration were clearly made out; and it was said that there were marks of violence on each arm, as if caused by the grasp of a man's hands while holding the deceased down on the ground. The prisoner confessed that he had been with the deceased till four o'clock in the morning, and that he had been connected with her, but with her own consent. His clothes confirmed the fact of the connexion; and hers, found on the body, were stained with blood and dirt.

Such were the leading facts in the case for the prosecution: the obvious inference from which would be, that the violation had been effected after the deceased had been seen alive for the last time, and that she was then murdered. The crimes were laid to Thornton's charge, as he had expressed his intention to have carnal knowledge of the deceased, and had been seen in her company so late as three o'clock: he acknowledged, indeed, himself, that he had been with her till four.

Account of Thornton. — It will now be proper to state what account the prisoner was able to give of himself; and perhaps it may be as well to premise a few words relative to Thornton's *personnel*. To such a height did the public indignation carry all those who had not seen the man, that they believed him to be "a bloated disgusting-looking person," at least twice as old as Mary Ashford (who was twenty), and likenesses of the parties were sold in all the print-shops, shewing, of course, as much contrast in their respective physiognomies as possible;—he all ugliness, she a Venus; in fact, it was

a sort of "beauty and the beast" affair. Those, however, who were enabled to satisfy their curiosity by a sight of the monster (as thousands did when he was brought up on successive occasions at Westminster), found that he had been unfairly dealt with; and he is described by eye-witnesses as "a stout, well-looking young man, about five feet seven in height, with a fresh complexion, and appearing to be not more than twenty-five or twenty-six years of age." He was the son of a respectable builder at Castle Bromwich, and worked at the business as an assistant to his father.

When, on the morning the body was found, the circumstances were canvassed on all sides, it was suspected immediately that Thornton was implicated, and steps were taken to have him apprehended. Daniel Clarke, the publican who kept Tyburn-house, went over to Castle Bromwich, where he met the person he was in quest of, riding on a pony along the turnpike-road. I shall quote the evidence of Clarke. "I asked him what became of the young woman who went with him from my house last night? He made no answer, and I told him she was murdered and thrown into a pit. Prisoner said, Murdered! I said, yes, murdered. Prisoner said immediately, I was with her till four o'clock this morning. I asked him to come along with me to clear himself; he went with me to my house, better than a mile; he said he could soon clear himself; he said nothing more about this; we were talking about farming and the like. He put up his pony; he said he should walk afoot to Sutton. He went into the room and had something to eat and drink; he might remain there half an hour; he staid in the house till the constable came. I did not offer to discourse about the murder afterwards, although I was very much shocked. I did not know that the prisoner had been with her till four in the morning, till he told me. I thought he appeared a little confused when I first put the question to him."

Prisoner's statement. — On being taken before a magistrate, Thornton made a voluntary deposition to this effect,—that he had been at the dance the evening before, and stayed till twelve o'clock; that he then went away with Mary Ashford and two others; that after the latter had left them, he and Mary Ashford went on as far as Mr. Freeman's [marked in the map as Grandfather's]; they then turned to the right, and went along a lane [Bell lane] till they came to a gate and stile on the right hand side of the road; they went over the stile, and along the foot-path across four or five fields—could not say how many. [Here the fact of the connexion seems to be *implied* in the prisoner's examination — nothing is *stated;* he then continues—] Examinant and Mary Ashford then returned the same road; when they came to the gate and stile they first got over, they stood there ten minutes or a quarter of an hour talking; it might be about three o'clock. While there a man came by, to whom examinant said "good morning!" and the man said the same; he (Thornton) and Mary Ashford stayed at the stile a quarter of an hour afterwards; they then went on together towards Erdington, (within a short distance of Mrs. Butler's), where he parted with the girl, and never saw her after. He waited for her about five minutes, expecting her return; it was then four o'clock, or ten minutes after four. Examinant then went by the foot-road home; passed Shipley's; afterwards went by Holden's, where he saw some people busy about cows; then came to the flood-gates, on the way to Twamley's mill, where he saw the keeper, whom he knew, and of whom he inquired the hour; it was near five o'clock; and so on, he described his journey home.

Now every part of this statement or deposition capable of being verified by collateral testimony, was found correct: the other part rested on the same sort of presumption on which the alleged circumstances of the murder rested. The question was, which presumption was the stronger.

Circumstantial evidence.—There cannot be a doubt but that Mary Ashford was in Thornton's company, alone, from shortly after twelve till three in the morning. This included the dark part of the night: it was clear day-light by three o'clock, and people were up and stirring, going to their work by four, or soon after. Was the defloration effected within those three hours, or not till half-past four or later? In other words, did Thornton exercise all his arts of seduction in vain during the period which was in every way most opportune for him,—or did he way-lay her on her road home, violate her, and then murder her by drowning, all in open day-light, and beside a frequented foot road?

Mary Ashford changed her dress when she called at Mrs. Butler's. If the sexual intercourse took place before this, would she have been in good spirits and cheerful, as her friend described her,—would she not have complained, — and would not her dancing clothes betray the treatment she had met with? As to the first, it is clear that she dissembled with her friend: she also told her what was not the fact—that she had slept at her grandfather's, and concealed the circumstance of her having

parted with Thornton only shortly before. But the evidence conneeted with the clothes is worth observing. The gown, pettieoat, and white silk stockings (her daneing dress), whieh she took off at her friend's, and there wrapped up in her bundle, were exhibited to, and examined by, the jury at the trial. They were all bloody: the stockings particularly were stained all the way up. It is true that the frock she then put on was found very bloody also in the seat part behind; but the black worsted stoekings worn at her death were not bloody, but quite clean and unstained, exeept one little round spot of dirt on one of them.

That she had the menses on her, and that, too, profusely and unexpeetedly, that morning, is eertain: she also lost a great quantity of blood in eonsequenee of the defloration. Now it is very remarkable that she never told Hannah Cox the state she was in, if it were only in respeet to the menstrual diseharge: nor is it easy to eoneeive any motive for eoneealing it, unless in connexion with other points to be eoncealed also.

The medical evidence.—I shall read for you the medical evidenee given by Mr. Freer—taking occasion to observe, that it is perfeetly authentie in the form in whieh it is here reported, being, in fact, the judge's notes of what fell from the lips of the witness.

"Mr. George Freer, examined:—"

"Is a surgeon at Birmingham; went on Tuesday [27th] to the eoroner at Penn's Mills. Examined the body at night, at half-past seven o'cloek. Had a cursory view of the body. Being night, *I reserved the examination for another day*. I observed the body was plaeed in a very dark and small room: it was removed into a larger room. During the time of its being removed, I went to examine the pit. When I returned, *they had undressed it*, and *just washed off the upper surface*. Between the thighs and the lower part of the legs was a great deal of blood; the parts of generation were laeerated, and a quantity of coagulated blood was about those parts. *It was getting dark, and I deferred the opening of the body till Thursday morning*. On Thursday morning I proeeeded to open the body, and found the parts of generation laeerated; some eoagulated blood about them; and she had the menses upon her. I then opened the stomaeh, and found in it a portion of duek-weed, and about half a pint of thin fluid, apparently chiefly water. In my judgment she died from drowning. Two lacerations quite fresh. I was perfectly eonvineed (that) till these laeerations she was a virgin. Some eoagulated blood adhered to them. Saw the eoagulated blood on the ground. The menses do not produce sueh blood as that. The coagulated blood proceeded from the lacerations. The laeerations were from the sexual intereourse.

"Cross-examined.—Observed no marks of violenee at all but what I have mentioned. Nothing in the coagulated blood or the laceration that would produee death. There was no laceration but what might or might not arise from sexual intercourse with a virgin, with eonsent and without violenee. It is very evident that the menses eame on at a very unexpeeted moment by her. It may inerease a little for a day or two: may be less at first, and increase in an hour or two. It might become extremely eopious and troublesome.

"Re-examined.—Dancing likely to increase it. About five feet four inehes high: robust, fine young person. An unusual quantity of blood, independently of the menses."

I eannot help here remarking, eonsistently with the principles and rules laid down in the preceding lecture, that there are some striking faults in the medieo-legal eonduct of Mr. Freer. Upon his own showing, he did some things which, I should say, he ought not to have done. Why did he reserve the examination for *another day*? The alleged rape was committed early in the morning of Tuesday; he had an opportunity of making a personal inspeetion on the Tuesday evening: yet he put it off till Thursday! Surely this was not the way to go to work in order to deteet sexual lesions. He also allowed the body to be *undressed*, apparently without directing any attention to the state of the clothes; and what is worse, he permitted the body to be washed,—"they just washed off the upper surface,"—without noticing the many appearanees whieh possibly might have been observed in an early examination of the parts. But to return to the general evidenee.

General evidence resumed.—The foot-marks in the harrowed field, and in the elover field, seemed to give damning proofs against the prisoner. But at what time were they made,—before or after the parties were seen at the stile? Thornton is said to have admitted at the trial that the evidenee was eorrect respecting the foot-prints of the running, dodging, &c. (A.) *towards* the clover field; but he denied that the traek (B) *from* that quarter towards the lower gate was his; and it is worth noticing, that the print beside the pit was not in any manner shown to be his: his left shoe was not eompared with it, evidently because there was some obvious dissimilarity. And, by the way, concerning the foot-marks on which so mueh stress has been laid, long ere the requisite eomparisons were completed, they were so confounded with the foot-prints made by

numerous visitors who came upon the ground, together with some rain which fell, that it became necessary to secure the identity of a few of the impressions, by boarding them over.

I shall not go through the details of the *alibi* set up by the prisoner. Two points in it, however, are so strong as to be almost conclusive. The last time Mary Ashford was seen by any of the witnesses was about twenty minutes past four, when going up Bell-lane alone; but Thornton was seen at Holden's, walking home leisurely, and by no means heated or hurried, at about half-past four. Now the distance from Mrs. Butler's (which Mary Ashford left at ten minutes or a quarter past four) to the pit, is one mile, two furlongs, and thirty-eight yards; and the distance thence to Holden's, by the shortest possible route, is two miles and two furlongs: so that the whole distance gone first by her, and afterwards by him (after the supposed murder) was upwards of three miles and a half. Is it at all possible that these three miles and a half could be traversed—all the running and dodging have taken place—the violation, the murder by drowning, and all inclusive—within *ten*, or at the very utmost *twenty* minutes, making every allowance for inexactness of clocks — which clocks, however, were, in the course of Tuesday, carefully compared? Now this is the difficulty in regard to the *alibi*, which must be got over by those who are not shaken by the other evidence.

But is it not an extraordinary question to ask, after all this, and asked it may certainly be without impropriety, whether there was *any* proof of murder in the case? There was none of rape: what was there of murder? It does not seem to have been proved that there was any killing even: there was, therefore, no *corpus delicti*. Yet, though there was no evidence of either murder or rape having been committed by any one, Thornton was tried for having committed both!

Probable cause of death.—It will always remain a curious speculation, how, if she were not murdered, did the unfortunate Mary Ashford perish? Was it by suicide, or by accident. Her shoes were very bloody: they must have been so when she put them on again after changing her stockings at Mrs. Butler's; for her black stockings were wholly free from blood. Those shoes were placed together at the brink of the pit with her bonnet and bundle, in such a manner as no murderer would leave them, even if he wished it to be considered a suicide, for their bloody appearance must necessarily lead to further inquiry. There is a bare possibility, of the very slightest description, that she committed self-destruction. Yet, supposing this to be the case, in consequence of some sudden fit of despondency seizing her on her way home, what could have induced her to take off her bonnet and shoes, and to place them so carefully as she did? On this fact it is, that a third, and, as I think, the most plausible conjecture as to the manner of her death, is grounded. I shall quote the words of an intelligent and learned gentleman (Mr. Holroyd, son of the presiding judge) who wrote the most clever pamphlet which appeared on the subject, and who seems to have first suggested this mode of accounting for the death of the deceased. "In her bundle were her half boots, the only part of her daily dress which she had not resumed. One of her dancing shoes, with which she was returning home upon her feet, being all blood, and the other bloody, who can say whether, startled with observing as she walked, that blood upon it which would be visible to persons meeting her upon the road, and to her uncle upon her return home, she might not have put down her bundle, and taken off her shoes and bonnet, in order to take out and put on her half boots instead of her bloody shoes? And what was more probable than that she should do so? If that was the fact, when the exhaustion and fatigue she had gone through in her walk to Birmingham and back again (12 or 13 miles) the day before, her dancing at night, her want of sleep and rest afterwards, the circumstances attending the connexion that had taken place between her and Thornton, her loss of blood, and want of nourishment, for none was on her stomach when her body was opened, what is more probable than that in stooping and turning to take out her half boots in order to put them on, on the top of a bank of a very sloping pit side, where the surface of the water was as much as four yards below the pit bank, she should, by an inadvertent step backward or otherwise, slip in, or turn faint and giddy, and so tumble in?"

In concluding this somewhat detailed account of so remarkable and mysterious a case, I cannot refrain from saying, that, in my opinion, the acquittal of Thornton was right. There was no evidence save of the defloration and death of the girl; of rape and murder there was none, except what was of the most loosely circumstantial nature. Thornton, however, had the guilt of the seduction and defloration, and no doubt, by implication, the death of the unfortunate girl to answer for; and if there be weight in the indignation of an insulted public, he has long ere this expiated his heavy offence. He was hooted from the society of his fellow men in this country, and

was obliged at last, I understand, to take refuge in America.

Margaret Patterson's case.—I mentioned, in the last lecture, the importance of examining the persons of individuals said to have been violated, with a view to finding *indicia* of violence and cruelty; which are sometimes found by searching the cavities — the mouth, for instance — where substances may have been introduced in order to prevent the victim from calling for help. But who could have imagined what was discovered in the body of an unfortunate woman who was brutally ravished some years since in Scotland? I allude to the affair of the Gilmerton carriers, who violated and murdered Margaret Patterson, in the year 1830. The details of the crime were too horrible for exposure to the public eye. At the trial, the proceedings were conducted with closed doors, and no report of the evidence has ever been published, or perhaps preserved. What we know of the nature of the crime committed is sufficiently shocking. The victim, an unprotected female, making her way on foot from Edinburgh to Dalkeith, was taken into their cart, by those villains, under the pretence of assisting her on her journey. There they violated her person repeatedly, and became so infuriated with their wickedness that they took stones from the road, coal, straw, prickly plants, and every thing they could immediately find, and forced them into the vagina. When she fainted and sunk under her tortures, they threw her out of the cart into a ditch by the road-side, where she was found next morning, with only life enough remaining to linger out three days of agony; luckily, however, with the power to disclose the names of her murderers. On examining the body after death, the substances just mentioned were found in the vagina and rectum—for both passages were broken down into one—the perinæum being dreadfully lacerated. All the abdominal viscera were in a high state of inflammation. I subjoin the Latin account of the horrid transaction, as it was given in the *North Briton* newspaper, by the learned editor, Dr. Browne:—

"Quum ii scelestissimi vehicularii, omnis nequitiæ et immanitatis capaces, Diabolo suadente, fœminam, semel atque iterum, in vehiculo suo constupraverant, atque ita crimen raptus pœna capitali puniendum admiserant, procul dubio est, ut in vaginam miserrimæ lapides tres, iis similes quibus via publica strata est, carbonem, stramentum, gramen cum spinis quibusdam, injecerunt, osse thoracis nexilis, ut fistuca, utentes: quo facto, raptores, sævitia gaudentes, miserrimam e vehiculo dejecerunt et postea corpus exanime in fossam juxta viam publicam abripuerunt. Et plus triduo, id est dum Gilmertoni commorata est, ac etiam usquedum mors finem fecit miseriis, fœmina hæcce intra abdomen suum habuit lapides, carbonem, stramentum, gramen, cum spinis quibusdam, scelestissimis vehiculariis inferta, more nefando, per os thoracis nexilis, ut jam superius dictum est. Post mortem, dissectione corporis facta, omnia hæc inventa aut in recto aut in vagina; perineum ita dilaceratum ut ex vagina et recto una tantum canalis facta, quod rarius accidit, etiam in parturitione difficilima; hæmorrhagia fere continua, qua multus sanguis effusus et indusium penitus totum cruore tinctum; signa violentiæ cruribus impressa; atque omnia intra abdomen inflammata."

The two wretches were executed, of course; but it is only the punishment which some of the old feudal governments, most skilful in torture, would have inflicted, which could have been adequate to the enormity of their guilt.

STUPRA CONTRA NATURAM.

Multum mihi animo volventi utrum, cum de stupro violento dissererem, pauca quoque de vitio isto abominando contra naturam adjicere auderem, ita facere tandem visum est. Nam si omnem mentionem stupri istius omitterem, sic mecum reputavi, hiatus certe insignis in hisce sermonibus foret; et dein censendum, si apud auctores Germanos, Italos, et Gallicos, quorum in patria crimen violatæ naturæ leviter tantum vel non omnino punitur, attamen notatu dignum habeatur, quam multo fortiori argumento apud nos, quorum legibus hujus criminis damnatus capitali pœna percutitur, de hac re nefandâ verba facere necesse est. Idcirco salvo pudore, sub umbra doctioris linguæ, παῤῥησιαζεσθαι liceat.

Casta severitas majorum vix nomen criminibus hujusce generis imposuit. Cum Langobardus quidam sceleris istius sodomitici accusatus esset (an. 50, Edw. III.), crimen ejus "peccatum illud horribile inter Christianos non nominandum" vocabatur. Hodierni tamen haud tam delicatis auribus vel lingua præditi sunt.

In prælectione penultima* locus statutorum recentium [9 Geo. IV. c. 31] laudatus est, in quo, crimen de quo agitur, proprio et nudo nomine appellatur. Et in sectione xv. ejusdem statuti flagitium abominabile cum sua pœna apertissime denunciatur. Quisquis porro post annum suum decimum quartum scelus hoc commiserit capite damnatus erit, et suspendio

* Vide Lecture X. p. 321, *ante*.

punietur; et hoc, quanquam socius in amplexu abominabili, sine vi illata consensum dederit. Non obstante terrore legum, haud perraro casus istiusmodi in foro audiuntur: falso vel vere crimina individuis objiciuntur, et luminis quod medicina præbere nonnunquam potest magistratibus opus est.

Stuprorum nefandorum plurima genera recensentur: stuprum videlicet masculinum, inter marem et marem patratum, nomine παιδεραστια antiquis bene notum; stuprum fœminarum inter se, quod Div. Paulus in Ep. ad Rom. verbis igneis denunciat — antiquioribus pernotum ut τριβαδικη ασελγεια, recentioribus autem, quam familiariter, Nuptiæ Romanæ, vel Facetiæ Florentinæ, nuncupatum; dein stuprum cum cadaveribus, sicut inter Egyptios haud inusitatum fuit, nec, si quibusdam credatur, temporibus longe præteritis intentatum in aliis locis; et denuo, hominum (proh pudor!) cum bestiis. De uno alterove horum vitiorum, quanquam durum atque molestum de vitiis verbum facere quæ hominem infra animantia cætera deprimunt, pauca in medium afferre oportebit.

1. Quænam sunt signa quibus masculinum stuprum testatur? In judicando caute procedendum est; namque factæ penetrationis indicia haud facile pro certo attineri queant. Vel recens est stuprum vel vetustum; vel semel, aut saltem paucis vicibus, flagitium admissum est, vel in consuetudinem venit. Recentis flagitii documenta, ad judicium probabile accedere possunt. Vetusti sceleris, et raro patrati, nulla signa supererunt. Si vetustum et consuetum, possibile est, inspectione partium, fidem circumstantiis aliter cognitis addere.

Audiamus quid dicit celeb. Orfila, satis audacter, ut opinor, hac de re ex cathredra loquens:—"L'ouverture du rectum presente chez les personnes entachées de ce vice la forme d'un entonnoir, remarque due à feu M. Cullérier, qui, en sa qualité de médecin de l'hospice des vénériens, n'a que trop souvent eu l'occasion de la vérifier. Le bourrelet de l'anus est gros, boursoufflé et lâche; le sphincter se contracte difficilement, et le doigt entre sans effort. Il est vrai que cette disposition de l'anus suppose en général un certain nombre d'introductions; mais la disproportion entre le membre viril et l'orifice peut être telle que la forme de l'ouverture du rectum soit changée, même par suite d'une première tentative. Des hémorrhoides considérables, des fistules profondes, le renversement, le squirrhe, et même le cancer du rectum; telles sont les maladies qui peuvent accabler les personnes qui se livrent habituellement à la sodomie."

Consilium idem auctor tunc addit, caute distingendum esse, ne pro stupri nefarioris indiciis morbi venerii effectus sumantur. Namque rhagades, verrucæ, cristæ, mariscæ, ficus, in errorem facile inexpertum perducere possint.

Illustris ille Parent-Duchatelet nuper et nimis cito morte prærceptus, in opere suo *De la Prostitution*, fidem nimiam signo isti a Culleriero monstrato reponere vetat; proptereaquod nemo medicorum dispensatorii a se consultorum, neque DD. Jacquemin et Collineau, ne uno quidem exemplo in pluribus casibus ubi stuprum contra naturam in fœminis admissum fuit, istam intestini recti conditionem infundibuliformem compertam habuerant.

2. De vitio fœminarum quas Tribadum nomine appellant, vix quæstio in curiis oriri potest, nisi cum crimine alio scelus istud conjunctum sit. M. B. Valentinus insignem narrat historiam quâ "furens quid fœmina possit" exemplo memorabili docemur:—"Fœmina sexum virilem diu mentita tandem aliam sibi conjugio maritari, et, horrendum dictu! copula sacerdotali jungi curavit; cui ut se virum præstaret, membrum virile artificiale, femoribus et inguini alligando, et cum amasia sua consuescendo muliebria hujus tantopere exercuit, ut tandem miserrime violata nefandum facinus consanguineis primum, et abhinc magistratui publico detegere necessum habuerit." Facinus de quo loquitur Valentinus Facultati juridicæ Giesseniæ relatum est anno circiter 1721 ut de pœna consultum esset; nam rea convicta crimen confessa est et pœnam tun temporis quo Valentinus scripsit, expectabat.

3. Quandoque consortii carnalis cum bestiis, nempe equabus, vaccis, canibus, suibus, gravis suspicio oritur. In talibus casibus nefandis, vix fides adhibenda est, nisi complures testes asseverent se flagitium vidisse. Attamen si ex inspectione animalis probamina criminis magistratus colligere velint, quærant veterinarios. Casum brevem, in quo per indicia super corpus animale visa crimen detegebatur, adjungere liceat. Albertus Meckel in suo *Lehrbuch* rem hisce verbis narrat:—"Ein junger Hirt missbrauchte kürzlich eine Kuh; die That wurde entdeckt, weil die Geschlechtstheile der letztern in Entzündung gericthen, und das Thier erkrankte. Der Grund dieser Erscheinungen lag jedoch keineswegs in der *mentula* des Knaben, vielmehr darin, dass letzterer, weil er Schwangerwerden des Thiers befürchtete, dies zu verhüten, einen Stock in die Geshlechtstheile geschoben hatte!" De stupro cujuscunque generis, hactenus: tantum.

CLINICAL LECTURE,

Delivered at St. George's Hospital, December 2, 1836,

By Dr. Seymour.

PURPURA HÆMORRHAGICA.

I promised to speak to you to-day respecting a case which is one of considerable interest, from the great obscurity which exists regarding the cause of the disease.

It is that of a man named Ward, who came into the house some time back, labouring under purpura hæmorrhagica. He went out apparently well, but subsequently returned, and has since died.

Now what is purpura hæmorrhagica? The name is applied to an ecchymosis, or an effusion of fluid under the cuticle. This occurs sometimes in very large spots towards the end of malignant fever, and it occurs likewise without any fever being present. Sometimes there is not only effusion under the cuticle, but it extends over the whole surface, and to a number of the mucous membranes. There is bleeding from the nose, bleeding from the mouth—a sort of exudation of blood into the mouth, the stomach, and the intestines: this sometimes occurs without an effusion under the skin, and sometimes with it. Sometimes, under these circumstances, very large quantities of blood are passed from the kidneys, sometimes from the conjunctiva of the eye, and from the membrane lining the ears.

It is observed under very different circumstances. The most frequent form of purpura is accompanied by a languid pulse, and there is a great tendency all over the body, on the occurrence of any accident, to the extravasation of fluid from the vessels: this would appear to be particularly the case in the last stages of fever. These petechiæ, vibices, or whatever name you choose to give them, arise from a weakened condition of the circulation in the capillary vessels, and, as we may well suppose, a dissolved state of the blood. The blood drawn in this disease does not coagulate in the same manner as under ordinary circumstances; it does not separate. When persons die from these hæmorrhages, they often expire from a great quantity of blood being extravasated upon a vital organ—the lungs, the liver, or the surface of the brain. A case occurred not long since to Dr. Macleod of this disease, in which after death a clot of blood was found in the brain. Dr. Elliotson mentions one or two cases in his lectures, which proved fatal by an effusion in the brain.

But there is another form of the disease, where, instead of the circulation being diminished, it is greatly increased.

This man, Ward, was admitted on the 14th September, with an eruption of purpura about the arms and lower extremities, coalescing over the feet. At the time he was admitted his mouth was affected by mercury. It was clear that he had laboured under some degree of dropsy from enlargement of the heart, and he had been put upon mercury with a view of diminishing some inflammatory action which was supposed, and which undoubtedly did exist. When he was admitted the first thing was to cure his mouth, and he was then put on mineral acids. Three drops of carbonic acid, and two drops of nitric acid, were given in an infusion of orange peel, two or three times a day. In all extravasations of blood, the acids have been considered particularly useful.

Some persons perceive an analogy between this disease and sea scurvy. Sea scurvy is attended with this extravasation of blood; but there is extraordinary weakness of the constitution, the gums are spongy, the teeth fall out, the bones soften, the muscles also become soft, and under the skin are effused these purpura spots upon which we are speaking. Some persons have consequently thought that the purpura seen on shore must arise from a similar state of constitution; but this is quite a mistake. There is in the majority of cases, so far as I can see, no sort of analogy. The fact is quite notorious, that since the taking of vegetable acids by the fleets and armies abroad, scurvy has been almost entirely unknown. The disease used to carry off and destroy the crews of whole navies, but it has now become most rare where the sailors are provided with fresh lemon juice—and which is taken out for the purpose—or where they can procure fresh vegetables of any sort. The vegetable acids have been likewise prescribed with the same view in this disease; but inasmuch as these affections differ, we cannot expect they will produce the same effects.

The mineral acids have been thought useful, as giving tone to the circulating system, while at the same time they purified the blood. That was the idea, but of late we have heard that this is all wrong; that so far from its being the case, it is the neutral salts which are to act on the blood, and restore it from a black to a florid colour. Till the experiments on scurvy have been proved to be fallacious, we shall hardly fall in with this hypothetical idea. When I was physician to the Hospital Ship, I saw many cases of scurvy, and I never met with one which resisted the in-

fluence of vegetable acids. It is true that taking fresh meat, or taking fresh vegetables of any kind, will cure the disease, and free the patient from the state of body induced by being kept on salt provision; but it is quite clear, that if the acids act by turning the blood black, and the neutral salts by returning it to its florid condition, the quantity of acids given would not cure the disease—the disease would not get well under them; on the contrary, the introduction of acids into the system would make it worse. This, however, is not the case. If it is a problem at all, it must remain so, till we are enabled to prove that sea scurvy is cured in some extraordinary manner by alkaline remedies just as well as by acids—an experiment which, I think, is not likely to be tried.

Ward took this medicine some days, and the eruption decreased remarkably, and his mouth was now well; and arguing from the opinions which exist on the nature of the disease, from his face having been swelled, from the white appearance of the whole body, and the spots disappearing, instead of putting the acids into an infusion of orange peel, I ordered them to be put into a decoction of bark, with a little tincture of bark. This disagreed with him; he could not bear this quantity of stimulation, and I was obliged, of course, to discontinue the bark; but he went on with the acid; and finding that the action of the heart and arteries increased, I bled him, and the blood was buffed and cupped. I bled him a second and a third time, and the blood still presented the same appearances, separating into the ordinary coagulum which occurs in inflamed blood, with a considerable quantity of buff on the surface. This is a very different condition to that of the state of purpura, in which the vessels pour out, as it were, a fluid perfectly altered in its composition.

On the 22d, a very slight portion indeed of the eruption remained; he had gained very great strength, and was dismissed. He was re-admitted on the 21st November, and therefore he had been out just a month, during which time, I should mention, it appeared he had been taking bark. It would appear that he returned with the eruption more conspicuous than ever all over the thigh and leg; he had a good deal of difficulty of breathing; there was pain of the head; and the pulse was hard and 120. There was now a considerable diminution of urine; so that, instead of putting him on the acid as before, I ordered him a diuretic draught of nitre, and kept his bowels open. He was bled again to twelve ounces, and the blood drawn was buffed and cupped, but not to such an extent as would induce you to repeat the operation. The coagulum was very firm, there was a large proportion of serum, and the buff surface was very much lessened; nevertheless, away went the eruption; it was hardly possible to discover it.

This was on the 23d; the purpura was scarcely visible, and some difficulty of breathing began to take place; and on the evening of the 24th he had a shivering fit, which was followed by great dyspnœa, and some degree of indistinctness. The breathing was somewhat of a stertorous character, but at the same time not such that people are generally subject to when there is any indication of increased action. I believed that effusion was taking place to the brain; but not thinking from the last appearances that he would be relieved by more bleeding, I ordered a blister to be applied between his shoulders, and a turpentine injection to be given. The blister rose indifferently, but on the following day he was better. He seemed to be greatly relieved by the injection, and it was repeated at night, though without avail; and he died on the 28th.

He was examined the next day, and many of you were present. All the symptoms were those of a person labouring under effusion in the brain; but there was no effusion of blood, nor was there extravasation of blood in any part of the body, neither had the muscles or the brain more bloody points than natural, nor was determination of blood apparent to any viscus. The brain was firm and white, and the fluid poured out perfectly clear and pellucid; not at all stained with blood, as is sometimes the case under these circumstances. The heart was enlarged, dilated, and flabby; and the valves, particularly the tricuspid valve—which is very uncommon—were thickened by that kind of deposit which, when it exists to a great extent, renders the arteries inelastic, and presents some obstruction to the flow of blood from one cavity of the heart to another. This is all that can be said of this disease as to the particular appearances.

There are certain circumstances connected with purpura which I shall mention, because they occur in other complaints, such as the subsidence of the eruption, and in some cases internal inflammation. I was much struck with a case which occurred some years ago. A man applied to me who had a large spot of purpura in the face—not a nævus maternus, but a regular spot of purpura. He was put on mineral acids, as usual, and I think he was occasionally bled. By this treatment the spot disappeared in a few days, but a violent attack of inflammation

of the pleura came on. He was bled repeatedly, put on mercury, and eventually got well of the pleuritic attack. Soon afterwards the purpura in the face re-appeared; he was again put on mineral acids as before; the purpura disappeared, and inflammation of the peritoneal covering of the bowels came on, from which he died. As soon as the purpura disappeared, these symptoms of internal affection began to take place. In the present case the effusion of blood upon the extremities, and into the cavities, took place in both instances connected with an enlargement of the heart; so that as soon as the extremities of the capillary vessels ceased to pour out this quantity of blood, they began to pour out water. The same thing occurs frequently in dropsy from enlargement of the heart. Where the dropsy has ceased, where the effusion of fluid which relieves the circulation no longer goes on, a vessel ruptures. These cases are of constant occurrence. There is a woman in the house at this instant, who has laboured under dropsy: there was no longer any effusion; the heart was beating over a considerable surface, and in three or four days she had a fit from effusion into the brain. She was largely bled; and after the second bleeding she came out of the fit. The lower extremities then became swollen; the cellular membrane filled with fluid; that was followed by relief, and she has since been better. But when the vital powers cease to make the dropsy, which is the relief of the symptoms, then great fear is to be apprehended of the rupture of a vessel.

I have seen similar cases to the one before us in young persons, and I have known them recover. A boy of 13 years of age came under my care: he was taken with what is called *cramp* in bathing. Some time after he was covered with spots of purpura, some of which were very large, and the heart was beating violently. I treated him as I should a case of inflammatory action of the heart; the inflammation was removed, and he got perfectly well.

There are two reasons for giving the turpentine injection. One is, that it is exceedingly useful in cases of serous apoplexy in making a determination to a distance. Stimulating injections are sometimes peculiarly useful under such circumstances; but in reference to this particular instance, turpentine is considered more especially useful where there is a transudation of blood from the vessels,—where it escapes in small quantities, as we see here; or in large hæmorrhages, particularly from the intestinal canal, there is no remedy so useful as the oil of turpentine. In the case of hæmatemesis, vomiting of blood from the stomach, it exercises apparently almost a specific influence. I have seen cases where two or three doses cured the complaint. A man was brought on board the Hospital Ship, who had lost a large quantity of blood in this way. He was ordered two drachms of oil of turpentine and two drachms of castor oil mixed up in a mucilage, and two table-spoonsful were given three or four times a day. In two or three days no blood made its appearance. No blood was ever brought up again from the stomach, and none made its appearance except that which had been swallowed and digested. In bleeding from the intestinal canal, a portion passes downwards; it undergoes a certain degree of the process of digestion, and is exactly like soot. Some people call this *melæna*, because they want to give it a name. It is a blood which has been swallowed, and which has been operated upon by the digestive process. This will go on for several days after hæmorrhage to any extent has occurred from the intestinal canal. I saw, in conjunction with Dr. Lee, an artist who had brought up blood, and who had been treated by calomel and other medicines, from a suspicion that it arose from an undue secretion of the liver. I was shewn half a wash-hand basin of blood. He took turpentine, and for several years I heard no more of the case. Last year he had another attack of vomiting of blood; he again took turpentine, and the complaint disappeared.

There is a case which I have seen within two or three streets of the hospital, where twice within six months the patient has vomited blood, and in both instances, upon taking oil of turpentine, it immediately disappeared. It would seem that in intestinal hæmorrhage, whether it arises from a breach of the surface or an exudation from the vessels, the oil of turpentine has a considerable influence in stopping it. I do not know that here we have an evidence of its stopping purpura because that disappeared, but I made choice of a stimulating glyster from its being so useful, rather than any other under the effusion into the brain which had taken place. It is quite certain that this man laboured under organic disease of the heart. So long as the dropsy occurred in the first instance he was relieved by it; when the dropsy disappeared, this purpura came out; and when the purpura was cured by remedies, serous effusion took place into the cavities of the body. This is the only explanation I can give of this case, though it does not explain all the phenomena which occurred. There are cases in which the capillary vessels pour out fluid instead of blood, dependent upon a diseased condition of the

heart, and which are much relieved by the secretion. The effusion from the capillary vessels induces what is called *dropsy*, and most generally in the cellular membrane. But with regard to purpura, the circumstances are much more difficult to be explained.

Where purpura accompanies the last stages of fever, stimulants are applied, and opium and camphor are the best combination with which I am acquainted for such purpose, together with wine. I remember seeing a case of petectual fever in a whole family. Two out of three of the patients owed their lives to the stimulus of opium, camphor, and wine. It is rare that you will see such cases, but it is scarcely possible to keep the patient from sinking. The same thing no doubt occurs in ordinary cases. The state is one of a great diminution of the powers throughout the system, and the vessels not only pour out this fluid from the mucous membranes of the body, but likewise into the vital organs of the body; and it would appear that most frequently this viscus is the brain.

There is a predisposition which we know nothing about, which is termed the *hæmorrhagic diathesis*. Certain people are constitutionally more disposed to bleed than others. Sir Benjamin Brodie relates a case of father and son, both of whom died from the extraction of a tooth. Some persons are very liable to a bleeding from the nose in a most alarming degree. In some cases purpura is present; and in some, hæmorrhage exists without purpura, either from the nose, the mouth, or the urinary organs; and sometimes purpura precedes the attack. It must be looked upon as the same disease.

Where fluid is effused under the cuticle, and hæmorrhage takes place in great abundance from some of the mucous membranes, some authors have attributed this form of the disease to the spleen. Many years ago, I saw a boy, twelve years of age, who laboured under epistaxis, accompanied with purple spots: the bleeding from the nose occurred to a great degree. He was bled, purged, and saline aperients were exhibited; and he got better, and remained so for some time. The epistaxis then returned, and nothing stopped it—neither bleeding, ice, nor plugging the nostrils. The patient bled to death, and even in his last moments blood squeezed out of the nostrils. On opening the body, no membrane was found to have given way; the Schneiderian membrane was more vascular than usual, as if the patient had had a severe cold, but that was all. The spleen, however, was three-fourths decomposed; it could not be collected. You will find several cases on record, of this disease connected with purpura, where it was found that the mass of vessels constituting the spleen were in a state of decomposition. Some persons suppose that the two facts may be connected, but the intermediate chain of reasoning no one can supply. When the disease is attended with a low condition of the system, it is supposed by some to arise from a weakness of the arteries, and others believe it to arise from an alteration in the composition of the blood itself. One does not exactly see how this should cause the exudation of blood on the surface. A third idea is, that it is connected, somehow or other, with disease of the spleen. No one knows what is the use of the spleen. It is a congeries of blood-vessels, largely supplied from trunks of arteries, and may be removed with impunity from the bodies of animals. It has been the fruitful source of a great number of theories, even down to our own times. Sir Everard Home suggested that the spleen was the organ through which substances passed into the circulation without going through the digestive organs, lymphatics, and thoracic duct; and thus accounted for diuretic substances being found in the urine so soon after they were swallowed; but he did not make out his case. Descartes, I think (at any rate, some philosopher), thought that its object was to keep the rest of the organs of body safely packed. Of late years, we have been told that it is the means by which warmth is preserved in the body in hybernating animals; that it is a sort of human warming-pan. The fact is, that no philosophical explanation has yet been given of its object. That it is a congeries of blood-vessels there can be no doubt, which, during the period of digestion, are more turgid than at other times; and some suppose that it is provided with super-abundant blood, as a reservoir during the period of digestion. It is quite certain, that in some of the cases of which we have been speaking, the spleen has been found in a remarkably unhealthy condition, and even allowing that it is of no use in the ordinary state of the body, in a diseased state it must be a very disagreeable addition to it.

I should state that I have seen persons recover, in a condition very similar to that which existed here, in which the blood has been inflamed, and the action of the heart and arteries has been very great. So I have seen persons recover who have been treated, in an opposite condition of the system, by stimulating remedies. I went, some years ago, with Dr. Locock, to see a woman, advanced in pregnancy, who had met with a fright, and soon afterwards

the appearance of purpura took place over the body. She was in a very low state. Her bowels were freely opened, and a feeling still exists, among some physicians, that repeated purging will cure the complaint. I have seen it tried in two or three instances, but never with success. I do not see how repeated purging can operate in curing such a disease. In the first instance, where there is some inflammatory action going on, it might be useful; but how it is to operate upon this condition in which blood is exuding from every mucous surface, I am at a loss to determine. We saw the woman again the next day, and she appeared to be dying. The pulse was hardly to be felt, and it became necessary that she should be stimulated. We were then of opinion that she should take bark; however, bark was not to be got immediately, it requires some time to make a decoction, and we therefore went to a chemist's; and the draught which was given I remember was this:—Six grains of subcarbonate of ammonia, one drachm of spirits of sulphuric æther, and two drachms of compound tincture of bark, (this brings back to my remembrance that we used the tincture because there was not time to procure the decoction of bark); and this was given, in camphor mixture, every two or three hours. I went away with little hope of seeing her again, but the next day she was better. She ultimately got well, and carried the child (which is very remarkable) the full time. This is one of the cases in which stimulation is not only necessary, but no doubt saved the patient's life. In general, when I am called to a case of this sort, and find the patient low, I am in the habit of giving the turpentine mixture three or four times; and if there be great depression of spirits, ammonia at the same time. If the case is of a more chronic kind, the treatment then is by mineral acids, fresh vegetables, and supporting the strength: in ordinary cases this will generally succeed.

The case which we have just considered was remarkable, and therefore ought to be taken out of the ordinary occurrences. It was attended with considerable action of the heart and arteries, and got worse under the influence of bark, or any permanent stimulus. If, under other circumstances, fluid had been poured out instead of blood, the circulation would have been relieved for some time from this state, which would have constituted dropsy; and, in fact, he did labour under this for some time.

GOUT.

Several cases were admitted on Wednesday last, but unfortunately not any of them are of very great importance. I will, however, state what they are.

There is one which is something similar to those of which we have been recently speaking—a case of gout. It is in a man named Graves, in King's ward, who complains of pain in the knees, attacking him sometimes with so much violence as to cause him to fall down. In addition to this, he had pain at the scrobiculis cordis, and the region of the stomach. His urine was scanty and high coloured, and there was pain in passing it. The bowels were confined. It would appear that this disease had sometimes come on very severely, and lasted some time, and then there was a perfect return to ease. Not knowing much better what to do with him, I opened his bowels, and put him upon small doses of colchicum, the same as the other cases.

RHEUMATISM.

A case of rheumatism was also admitted affecting the hands, and which was relieved by warmth.

One of those very bad cases, in which the patient was so frequently ordered to be bled, and according to the treatment which I laid down at the commencement of the course, was put upon guaiacum mixture and a grain of opium at bed time, I am happy to tell you, is going on as well as possible.

The man Allen, where the secretion of acid was so great, has entirely recovered. He appeared to me, after the blood-letting, to derive more benefit from guaiacum than any other remedy.

SCARLATINA.

In the case of scarlatina there is a little puffiness about the ankles, showing what would have been the case if we had not bled him, so as to prevent the coming on of anasarca.

PERICARDITIS SUPERVENING ON RHEUMATISM—LARYNGITIS TRACHITIS.

There is a specimen on the table, which has been kindly sent to me by Dr. Macleod, that those gentlemen may have an opportunity of examining it who were not at the autopsy.

This man laboured for some period of his life under rheumatic pericarditis. You may see the old layers of lymph thrown out on the pericardium. He did not die of this disease, but of inflammation of the larynx and trachea. There is extensive inflammation going into the state of ulceration at the upper part of the windpipe. It extends throughout the whole of the bronchial tubes. You may see the notes in Dr. Macleod's book, and compare the symptoms with the present appearances.

ON THE

INDUCTION OF PREMATURE LABOUR IN PREGNANCY

COMPLICATED WITH TUMOR.

To the Editor of the Medical Gazette.

SIR,

I SHALL be obliged by the insertion, in the next number of the GAZETTE, of the accompanying observations.

I am, sir,

Your obedient servant,

SAMUEL ASHWELL, M.D.
Obstetric Lecturer and Physician to Guy's Hospital.

Nov. 30, 1836.

Mr. Ingleby, the experienced teacher of midwifery in the Birmingham School, has recently published an able and interesting work on Obstetric Medicine. In one part of it there are strictures on a paper of mine, in the second number of the Guy's Hospital Reports, urging the "induction of premature labour in certain cases of pregnancy complicated with tumor;" and against the new principles and practice there recommended, Mr. Ingleby takes large exceptions.

The views contained in that paper are few and simple, and the treatment rests on facts, and is entirely safe. If I did not regard the induction of premature labour as a most valuable addition to our remedial management of these unfortunate complications, I would not occupy your valuable pages by a single word in its defence.

While, however, I thank Mr. Ingleby for the interest he has displayed in the subject, as I am convinced he is in error about it I am bound by my estimation of the importance of the practice to correct misconception, and to shew the general accuracy of the paper.

Pregnancy, whatever may be said to the contrary by Mr. Ingleby, is not unfrequently complicated with malignant tumors of the uterus itself, of the ovary, and with those of a purely adventitious character, growing either from the abdominal or pelvic cavities, and giving rise in labour to difficulties of the worst kind.

It can scarcely be necessary to confirm these statements by extended reference; but I may mention the eighteen cases of Dr. Merriman, numerous others, and my own, as clearly proving the not uncommon coincidence of conception with tumors dangerously obstructing labour. A perusal of Mr. Hewlett's case, in the seventeenth volume of the Medico-Chirurgical Transactions, of several of Dr. Merriman, and of my own (Nos. 1, 2, and 5), will satisfactorily establish the malignancy of the growths themselves. I might enlarge here; but sufficient testimony has been perhaps adduced, to neutralize an opinion of Mr. Ingleby, "that the coincidence of conception with a disease of the uterus, already malignant, is exceedingly rare."

If by the term "already malignant," it be meant that the growths in the unimpregnated state are fibrous, indolent, and harmless, and that their subsequently developed malignancy is the result of the vascular and nervous excitement of pregnancy, then a stronger confirmation of the correctness of my pathology of these enlargements could not be obtained; and if such be Mr. Ingleby's opinion, he must acquiesce in the propriety and advantage of an early termination of the gravid state, as its continuance must induce increased and almost permanent morbid activity of the diseased growths.

Again, Mr. Ingleby "having doubted the accuracy of my views," (a point, I trust, which my present communication may solve,) "thinks it questionable whether the instances already adduced, viz. those of Dr. Merriman, Mr. Hewlett, numerous others, and my own, afford sufficient data to establish, as a general principle, the adoption of the new measure in similar cases."

Now it must be remembered, that I propose to evade the dangers of inflammation of the pelvic tissues and peritoneum, and of the still more hazardous evils of unhealthy softening, suppuration, and ulceration, of the tumors themselves, by the simple and safe expedient of premature labour,—a practice accidentally suggested to me, and enforced on reflection, by the fact that death had frequently occurred where pregnancy was so complicated, under the best known treatment, exclusively of premature labour artificially induced. Nine out of the eighteen cases which fell under the notice of Dr. Merriman, terminated fatally; Mr. Hewlett's case was equally unsuccessful; and three of my own patients fell victims to gangrenous inflammation of the tumors,

produced by their contusion during the parturient process. Worse results could not have followed premature labour; and I feel confident that, had it been induced, several lives would have been saved. Mr. Ingleby would inquire, whether there was not sufficient mischief done to the uterus in these cases to insure a fatal event? Certainly not: in most of the cases mentioned by Dr. Merriman there is no allusion to the condition of this viscus; and when there is, it is stated, with one exception only, to have been healthy. In Mr. Hewlett's and my own examples, the womb was free from inflammation. I believe these patients to have been destroyed, as others will be, where premature labour is not practised, by morbid and malignant changes in the tumors themselves: collapse and final sinking having been induced, much in the same way as after pressure and strangulation of an intestine, or after contusion of the soft parts in difficult labour, where an inspection after death commonly brings into view intense inflammation, and sometimes gangrene and disintegration.

A valuable corroboration of the pathology of the practice, is furnished by the marked success attendant on puncturing the tumors, especially where their contents were fluid, or considerably viscid; and in one or two instances, where blood only escaped. By this operation the bulk and tension of the tumor is diminished, and the double purpose is accomplished of a partial removal of the obstacle hindering parturition, as well as a preservation of the growth from that severe pressure and contusion which may lead to rupture of its parietes, inflammation or gangrene of its substance.

The six cases published by Mr. Park, of Liverpool, in the second volume of the Medico-Chirurgical Transactions, are equally in point. Puncturing the tumors was the most successful of all the measures adopted, and it is worthy of observation, that the only fatal termination occurred in a case where the tumor, occupying the recto-vaginal septum, was subjected to the pressure and contusion of the fœtal cranium for three days. Delivery was eventually accomplished by the natural efforts, and the patient died in twenty-four hours, from vomiting and constipation.

A perusal of all that has hitherto been written on the subject, will satisfy any one that the proceedure to be adopted in these unfortunate complications, at the time of labour, is by no means clearly defined. If the opposing growth can be pushed above the brim, the parturient difficulty is at an end; but if it cannot be so raised, although puncture of the morbid structure is the best remedy for tumors with fluid contents, it will avail little in the management of solid and very hard growths. Extirpation by the knife may be thought of, but the connexions of the tumor, the shock of the operation, the probable hæmorrhage, and the subsequent inflammation, are events too certain and too hazardous to allow of a favourable prognosis.

These remarks are strictly applicable to morbid enlargements opposing the descent of the child; but they are equally pertinent to hard and malignant tumors of the uterus itself, and to ovarian and other growths, of such magnitude and firmness of attachment as to preclude the possibility (vide Mr. Hewlett's and my own cases) of their being lodged in the abdominal and pelvic cavities, together with the gravid womb, without excitement, pressure, and contusion. This observation is especially true where pregnancy is complicated with one or more hard tumors imbedded in the uterine parietes. If the induction of premature labour were dangerous to the mother—if it increased her risk at the time, or if afterwards it placed her in a worse position than she had previously occupied — Mr. Ingleby's sentiments would carry great weight. It is, however, satisfactory to know that none of these evils are the effect of premature labour artificially induced. Dr. Hamilton, of Edinburgh, my friend Dr. F. H. Ramsbotham, and many others, have frequently resorted to the practice, without the slightest bad consequence. My own testimony, from a rather large number of cases, is equally favourable.

I think, therefore, I may regard as proved, that great advantage will accrue from this method, where the tumor cannot be raised above the brim—where it is situated in the abdomen, and is of such size as to restrain the development of the uterus without painful pressure and contusion, or when the growths are in the uterus itself.

Mr. Ingleby, at the end of his candid and intelligent critique, admits "that an emergency may arise, justifying the measure; but, again, he doubts whether

Dr. Ashwell has sufficiently restricted and defined the principle which he advocates."

I am pleased that Mr. Ingleby, in his five divisions of appended cautions and conditions, has included all and nothing more than what my own paper contains. To this part of my essay I beg the attention of your readers, as this paper is too long to permit their being annexed to it.

OBSERVATIONS ON THE FUNCTIONS OF THE MUSCLES AND NERVES OF THE EYE-BALL.

By Edward F. Lonsdale,
Demonstrator of Anatomy at the Middlesex Hospital School.

In the number of the Medical Gazette for September the 24th, will be found a paper from Mr. Walker, of Manchester, on the Functions of the Muscles of the Eye-Ball, in which he offers a very ingenious explanation of the action of the superior oblique, by making it act in combination with the external rectus of the opposite eye, by which the parallel motion between the two eyes is produced, when we view any object laterally. It is for this reason, he says, that these two muscles have two distinct nerves distributed to them, while the other muscles have one common to them all.

As soon as I had read Mr. Walker's paper, I was anxious to know how far his theory was probable, and to what extent it was borne out by the anatomy and physiology of the muscles to which he refers the above action, and upon which he founds his theory. I have since considered the reasons he has advanced, and have thought a good deal upon the subject, without being able to come to the same conclusion that he has; for it appears to me, that so far from the superior oblique muscle acting with the external rectus of the opposite eye, that it never acts at all with it, but that its function is quite distinct and opposed to that of the external rectus. I shall give my reasons for supposing this to be the case, presently, after I have stated some of the objections that occur to me with regard to the view he has advanced; I shall then make a few remarks upon these muscles and nerves generally, and offer what appears to me a likely explanation of the complexity that exists in their mode of distribution and in their function.

Mr. Walker's explanation does not appear satisfactory to me, for, in the first place, I do not consider that the action of the superior oblique of the one eye can be in accordance with the external rectus of the other (even allowing the former muscle to turn the eye inwards); for the external rectus, acting alone, can pull the eye in one direction only, which is horizontally outwards, while the superior oblique rotates the eye upon its axis; and supposing it to turn it inwards, must at the same time turn it downwards: so that the axes of the two eyes cannot correspond if these two muscles act together, for the one will be turned on its vertical axis, and the other on its horizontal. At first sight, then, this view of their action must appear incorrect.

Mr. Walker also states, that it is on account of this lateral motion of the two eyes in one direction, that we find this complexity of the muscles and nerves distributed to them; and that if it had not existed, there would have been no necessity for any muscles except those that are used in looking straight forward. In making this statement, he appears to have quite overlooked the action of the eye-ball in connexion with the motions of the eye-lids, and the many involuntary motions the eyes perform totally independent of this lateral direction, and which renders the existence of many of these muscles necessary, even if this lateral motion had not to be performed. Again: if the use of the superior oblique be only to bring the eye of one side inwards, while the external rectus of the opposite side turns the other eye outwards, how is it that we find this muscle existing in those animals whose eyes are placed laterally, and in whom the parallel motion similar to that in man can never be produced. Take the horse or the sheep, for instance, and suppose that the superior oblique, according to Mr. Walker's theory, were to act with the external rectus of the opposite eye, one eye would be turned directly inwards towards the nose, while the other would be turned outwards towards the ear; so that the animal would be looking for-

wards with one eye, and backwards with the other, producing any thing but a parallel motion between the two. This muscle in these animals, then, and in all others with the eyes similarly placed, must have some other office than that Mr. Walker ascribes to it.

There is another point also in which I cannot agree with him, namely, as to the anatomy and individual action of the superior oblique muscle; for he says that it is "not inserted behind, but directly over, the centre of the eye-ball, or perhaps rather anterior to it, just over the tendinous expansion of the superior rectus, and passing down a little towards the tendon of the external rectus." This statement certainly made me anxious to examine this point again, and I procured a human eye at the earliest opportunity, and have since examined three others, and was much surprised to find the description he gives so different from what appears to me to be the true insertion of the muscle, for I could distinctly trace the tendon of the muscle going quite to the posterior and outer part of the sclerotic, to within about three lines of the entrance of the optic nerve: so distinctly can these fibres be traced, and also seen, when the tendon is pulled upon, that it appears to me difficult to mistake them. They are also made more evident by macerating the eye for a short time, when the tendon can easily be raised up from the sclerotic as far back as its point of insertion.

Such being the insertion of the muscle, its action must be that of rotating the ball of the eye downwards and outwards; for as the point of insertion is brought nearer to the pulley through which the muscle plays, it is drawn in a line upwards, forwards, and inwards, and so must turn the eye in the opposite direction, which is downwards and outwards. That such is the action of the muscle, I have repeatedly satisfied myself on the dead body; and the best way to get the action of it is by first turning the eye upwards as far as it will go, and then pulling upon the superior oblique, when it will be distinctly seen to move in the direction I have stated. This direction outwards, however, is not to that extent to make it an important action of the muscle, but is quite enough to show that the eye is turned contrary to the direction inwards. I believe that the chief action of this muscle is that of turning the eye downwards and drawing it forwards.

With regard to the nerves distributed to these muscles, Mr. Walker accounts for the fourth and sixth nerves each going to separate muscles, by supposing the superior oblique and external rectus to act together in the lateral motion of the two eyes. Allowing this theory of his to be correct as to the action of these muscles, this explanation of the nerves might appear satisfactory; but if it is found that they cannot act together in the manner stated (and the reasons for supposing they cannot I have given), some other explanation of their peculiar distribution must be sought for.

In speaking of the third nerve, Mr. Walker says, "Now, with regard to the muscles of the third pair, we perceive that they are brought into action in all those motions in which the two eyes correspond, such as straight forwards, with its modifications upwards, downwards, and inwards." Is it meant by this statement that the muscles supplied by this third nerve have the power of acting without the superior oblique and external rectus?—because if so, I conceive that many of them will produce any thing but corresponding motions between the two eyes, namely, the two internal recti and the two inferior oblique; their action together cannot do otherwise than turn the axes of the eyes in opposite directions. From Mr. Walker's statement, I should suppose him to think that the superior oblique and external rectus only act in accordance with one another, and with no other muscles, so giving them a distinct function, having the office only of producing the parallel lateral motion between the two eyes; for he says in the passage I have already referred to, "Doubtless, had it not been for this lateral motion of the eyes, there would have been no necessity for any muscles except those which are used in looking straight forwards."

Another important point which he appears to have overlooked is, that by allowing the superior oblique to turn the eye inwards, and to be the muscle that acts with the external rectus of the opposite eye, the internal rectus is rendered useless; for if this latter muscle is not called into action when the external one of the opposite eye acts, when is it called into action?—for it certainly is not with the internal rectus of the oppo-

site eye, otherwise we should be continually squinting, by having both eyes drawn inwards towards the nose. Where is the difficulty in supposing that, while the external rectus of one eye acts, the internal rectus of the other eye should be brought into action with it, and that the other internal and external rectus should remain relaxed until the eyes are wanted to be turned in the opposite direction? That this action can take place, I shall endeavour to show, and that it is dependent upon a peculiar sympathy between the two eyes, which is essential for the preservation of the parallel motion that must exist, in order to give us distinct and single vision of objects.

Having made these objections to Mr. Walker's theory, I shall now offer what appears to me a more probable explanation of the function of these nerves and muscles, and shall endeavour to show that they admit of being classified according to the peculiar motions the two eyes have to perform, and that their complexity may be much diminished by attending more to the sympathetic action that exists between them than hitherto has been done.

I shall first make a few remarks upon the many different directions in which the eyes can be turned, and mention certain laws that appear to be constant with regard to the action of the muscles connected with them; for it is upon the different motions they are capable of producing, and by attending to those that are voluntary, and those that are involuntary, that their true classification depends.

There appears to be a peculiar sympathy between the two eyes that causes one to follow the other in whatever direction we turn them, and over which we have no command, for we cannot prevent it, however much we try; when we turn one eye, the other must turn too. It is upon this law that our distinct and single vision depends; for, had the motion of both eyes at once been voluntary, we should then have been obliged to be constantly thinking of keeping them parallel to one another while looking at any object; and the least deviation of the axis of one eye from the other would produce indistinctness of vision, and so become an evil of frequent occurrence, by abstracting our thoughts from the object we are looking at.

There is also a sympathy between the motions of the eye-ball and the eye-lids, for we cannot move the one without moving the other also: thus if we raise the upper eye-lid, the eye-ball follows with it; if we close the eye-lid, the eye rolls upwards, and when we open them again it rolls downwards, so that certain muscles are brought into action quite independent of the will; for we cannot prevent the eye taking these directions, with the above motions of the eye-lids, however much we try.

With regard to the particular action of each muscle, I think it will be found that the following statement is a correct one. When one rectus of either eye acts, the eye-ball will be drawn in the direction of the side on which the muscle is inserted; thus if the superior rectus acts, the eye will be turned upwards; if the inferior, it will be turned downwards, and so on with the other two. If the four recti act together, the eye-ball will of course become fixed, as one will then antagonize the other, and this, no doubt, is one great use of these muscles—namely, to steady the eyes in any particular direction we may require, while looking at an object. It is said that when two of the recti act together, the eye is turned in a direction midway between the two muscles: thus if the external rectus act with the inferior, the eye will be drawn downwards and outwards at once by their combined action.

I am not at all certain, however, that two of the recti muscles ever do act in this manner, so as to pull the eye in an oblique direction; and this is an important point to ascertain, as upon it depends the possibility of the eye-ball being capable of rolling upon its antero-posterior axis, which motion I am inclined to think it never performs; for I believe it will be found that the only action the recti muscles have, is that of turning the eye directly upwards or downwards, inwards or outwards, and that they never act two together simultaneously in the same eye. The following experiment may be made to prove this:—Watch carefully the eye of another person when looking straight forwards, and then tell him to turn the eye upwards and outwards, and to try and carry it in a line midway between the two directions, without either turning it directly upwards or outwards. It will be found that if he perform this motion slowly, he has not the power of doing so; but that the eye is first of all

turned upwards by the superior rectus, and then turned outwards by the external rectus, and so brought to the object wished to be looked at. When the motion is performed quickly, the eye appears to move in the direction at once, for the action of the one muscle follows the other so rapidly, that it seems to take place simultaneously.

If two of the recti, then, cannot act together, so as to bring the eye in a line midway between the two muscles, we should not expect it to have the power of rotating, for, of course, if the eye cannot be brought into the intermediate position, it cannot be brought round from one muscle to another, which motion must take place before rotation can be produced. An experiment may be made to prove this also. If we watch the eyes of another person, and tell him to try and rotate them as much as he can, it will be found that no rotation takes place, but that the eyes are turned rapidly upwards and downwards, inwards and outwards, and that they are never brought into the intermediate position between any two of these directions. Lastly, when we look at the position of the four recti muscles, and at their mode of insertion into the sclerotic, they appear to be more fitted for acting all at once, and so to steady the eye, or else that one alone should act, and pull the eye in the direction of the side to which it is attached.

The fact is, that no rotatory motion of the eyes is required; for when we want to look at any object obliquely, upwards or downwards, we turn the head at an angle that enables us still to move the eyes horizontally; for we can place the head in any direction we like, and so bring the eyes in a position that allows them to turn upon their axis, the same as when looking at an object straight before us.

This lateral motion of the eyes, then, from side to side, being one of the two motions that is most frequently required, and there being also that peculiar sympathy between the two eyes that we cannot move one without the other one following in the same direction, are circumstances that render it necessary that we should have the power over one muscle only; for we only want a muscle to move the eye of the side on which the object we wish to look at is placed; and the other eye must follow by a sympathetic or involuntary power placed in it, and this one muscle is the external rectus; and now we see the reason why it should have a separate nerve, for in it is the only muscle over which it is necessary that we should have a voluntary power, when looking at objects placed laterally. Thus if we want to look at an object placed to the right, we will to turn the right eye, and the other follows immediately with it (for we cannot prevent it) so that we only want the power over one muscle, which is the right external rectus, and we will to move this muscle, and so turn the eye to the right, and the left eye follows sympathetically. If we wish to look at an object to the left, we relax the right external rectus, and will to move the left, and so turn the eye to the left side, and the right eye follows involuntarily. We have also the power over both external recti at once, which power we employ when looking at objects straight before us; for we then neither wish to move the eye to the right or left, and so make one external rectus act against the other, and the eye becomes fixed directly forwards.

If the above be the true explanation of this lateral motion of the two eyes, there can be no doubt about the external rectus being a voluntary muscle. It now remains to be seen what is the action of the other muscles, and in what manner they are influenced by the nerves going to them. The remaining muscles are the levator palpebræ, the superior, inferior, and internal recti, and the superior and inferior oblique; one of these, namely, the superior oblique, is supplied by the fourth nerve, while the other five are supplied by the third nerve. With regard to the third nerve, it is found to divide into two branches just before it enters the orbit, which two branches remain quite distinct ever after. The superior branch crosses the optic nerve, and supplies two muscles only, namely, the levator palpebræ and superior rectus, while the inferior branch goes below the optic nerve, and supplies the internal and inferior recti, and the inferior oblique. This inferior branch is also further distinguished from the superior, by going to form the lenticular ganglion with the nasal branch of the fifth pair.

It is upon this division of the third nerve into its two branches that I mean to explain the action of the remaining muscles, and wish to show that the

inferior or ganglionic portion governs the involuntary or sympathetic motions of the eye-ball, while the superior or ganglionless portion governs the voluntary motions. In order to support this theory that I have advanced, we must see if these two sets of muscles are so employed, and ascertain if the inferior rectus, internal rectus, and inferior oblique, are used involuntarily or sympathetically, and if the levator palpebræ and superior rectus are used as voluntary muscles.

The muscles the superior division of the third nerve supplies, as already stated, are the superior rectus and levator palpebræ; and there can be no doubt that their action is quite voluntary, for we can will to turn the eye-ball and eye-lid upwards whenever we like; and these two motions are done together, as both muscles are supplied by the same branch of the nerve; and they are required to be moved always in the same relation to one another, otherwise, if we turned the eye-ball upwards without the eye-lid going with it, this motion of the eye would be of no service to us, for we should move the cornea behind the lid, and consequently obstruct our vision by this movement. It was necessary, then, to combine the action of these two muscles together, and to give the voluntary stimulus to both at once, in order to preserve their relation one to another. And this is done by the superior or ganglionless division of the third pair of nerves, which I therefore call the voluntary portion. It now remains to be seen if the muscles supplied by the inferior or ganglionic branch of the third nerve possess the power of acting sympathetically or involuntarily. The internal rectus, one of the muscles supplied by it, I have already shewn to be completely involuntary; for it is brought into action with the external rectus of the opposite eye, and turns the eye inwards, quite independent of the will, for no effort on our part can prevent it following; for while we have a voluntary power over the external rectus, we have none over the internal; it is, therefore, an involuntary muscle.

With regard to the inferior rectus, I think it will be also found to act sympathetically; for it is brought into action only when the upper eye-lid is relaxed, and it appears to have a sympathy with the levator palpebræ; for so long as this muscle acts and keeps the eye-lid raised, so long are we prevented looking downwards, which we should not expect to be the case were the inferior rectus a purely voluntary muscle. When we want to look downwards, we must first of all relax the upper eye-lid, when the inferior rectus then acts in combination with a portion of the orbicularis palpebrarum, so causing it to be purely sympathetic in its action, for it cannot act independently by itself.

The other muscle supplied by this inferior portion of the third nerve is the inferior oblique; and there can be no doubt about it being purely involuntary or sympathetic in its action, for it turns the eye upwards when the eyelids are closed during sleep, or winking, which motion is quite independent of the will, for we cannot prevent it taking place, any more than we can prevent the eye rolling downwards when we open the eyelids. It is also sympathetic in its action; for we cannot bring the orbicularis palpebrarum into action without the inferior oblique acting at the same time, and producing the involuntary rolling of the eye upwards; in which position it remains as long as the eyelids are closed. So soon as the orbicularis muscle becomes relaxed, the inferior oblique does, but not till then.

The only muscle remaining to be accounted for is the superior oblique; and it, no doubt, is also quite involuntary in its action, for it is the antagonist to the inferior oblique, and not the inferior oblique that is the antagonist to it, as is generally described; for when the eyelids are closed, as during sleep or winking, the eye-ball, as stated above, is rolled upwards, which motion must take place before the superior oblique muscle can be called into action.

When the eyelids are closed, the eye-ball not only is turned upwards, but recedes to a certain extent into the orbit, by the pressure of the eyelids upon its anterior surface; so that it not only has to be rolled downwards, but also has to be brought forwards, when the lids are opened again; and this I conceive to be the office of the superior oblique muscle, for its position and peculiar course fit it for both these motions; its tendon going so far back, will bring the whole globe of the eye forwards at the same time that it rolls it downwards. It cannot be the inferior rectus that rolls the eye downwards during this motion of opening the eyelids, for I have

shewn that it cannot act except when the levator palpebra is relaxed, which of course it is not while the lids are being opened, for then that muscle is in strong action. The only muscle that can do it, then, is the superior oblique, and there can be no doubt about its action being involuntary, for, as before stated, we cannot prevent the eye-ball rolling downwards when the eyelids are opened, any more than we can prevent it rolling upwards when they are closed.

Thus it is seen that there are three voluntary muscles—namely, the levator palpebræ, superior rectus, and external rectus; and two voluntary nerves —namely, the superior division of the third and the sixth; while there are five involuntary muscles, none of which act except in sympathy with the voluntary muscles, and are supplied by two nerves—namely, the inferior division of the third and the fourth nerve.

It may be asked, if the superior oblique be an involuntary muscle, why should it not also be supplied by the same portion of the third nerve as the other muscles that I have called involuntary? The reason I should offer is, that its situation renders it necessary for it to have a separate nerve, as it is far distant from the inferior portion of the third nerve. Also the peculiarity of the course and action of the muscle would lead us to expect a separate nerve to be distributed to it; at the same time that it is also an antagonist to one of the muscles supplied by this portion, the third—namely, the inferior oblique; which is an additional reason why it should not be supplied by the same nerve, but rather have a separate one to itself.

There is a motion of the eyes that I have not yet considered, and one that I think further illustrates the theory I have advanced; I mean where both eyes are turned inwards towards the nose, when we look at any object placed very near. It will be found that if we place the finger, or any object, midway between both eyes, and look stedfastly at it, and then gradually approach it nearer and nearer, both eyes turn directly inwards, and an involuntary squint is produced. The reason of this, no doubt, is, that both external recti becoming relaxed, which they must before the axes of the eyes can suit themselves to an object placed so near, causes the involuntary muscles to come into play, which are the two internal recti, and they then draw both the eyes inwards, and produce the squint that is found to take place. That the external recti are relaxed in this case, is proved by our being able suddenly to bring them into action, when immediately the near object we were looking at becomes indistinct, and the axis of the eyes is accommodated to an object more remotely placed. We have only again to relax the external recti, and the involuntary squint is immediately reproduced; and we see the object placed near the nose as distinctly as before.

It may be said, that if the above motion of the eyes is dependent upon the involuntary action of the internal recti, how is it that some people have the power of voluntarily squinting inwards? To this I should answer, that it is not found that every body can produce this voluntary squinting; which we should expect they could, were these muscles under the influence of the will; for it is found that some people can only squint in a very slight degree, while others cannot at all. This circumstance I should explain by supposing that some have the power of relaxing both external recti at once, either naturally or from habit, while others have not this power; and as the external recti cannot act until these muscles are relaxed, is the reason why some can voluntarily squint while others cannot.

Squinting downwards and inwards is produced by the voluntary portion of the third also being relaxed, for so long as the stimulus of the will is given to the levator palpebræ and superior rectus (supplied by this upper portion of the third), so long is squinting inwards only produced; but immediately on relaxing these muscles, the eyelid falls, and the inferior rectus then pulls the eye downwards; which it cannot do so long as the levator palpebræ and superior rectus are in action. This motion, then, suits the theory that I have advanced, of the levator palpebræ, superior and external recti muscles, being purely voluntary; for while they are kept in action the eyes are neither turned inwards nor downwards, but immediately on relaxing them they are rolled in both these directions, and an involuntary squint is produced.

This, then, is the explanation I should offer of the action of these muscles, and of the function of the nerves

distributed to them; which I fear, however, may seem complicated, and that many may have objections to advance against them. I merely offer it as one that appears to me plausible, from the fact of its classifying the different muscles in a manner that agrees with their peculiar action, and with the peculiar distribution of the nerves that supply them. The view that I have taken of the superior division of the third nerve being the voluntary portion, and the inferior the portion that governs the sympathetic movements of the eyes, I am not aware to have been advanced before; and it appears to me to be probable, since what I have called the voluntary portion certainly supplies two muscles, over which we have perfect command — namely, the levator palpebræ and superior rectus; while the inferior portion supplies muscles that chiefly sympathize with those muscles that I have called voluntary, and never act by themselves until these latter muscles are relaxed; and this sympathetic action is gained by the peculiar connexion of the inferior division of the third nerve with the lenticular ganglion and the fifth nerve, which is known to give sensation to the eye, and to be the nerve that excites many of the involuntary motions that exist between the eyeball and eyelids *; which motions are produced by this lower division of the third, and by the fourth nerve.

There is another action, also, which goes to prove this lower portion of the third nerve to be involuntary—namely, the action of the iris; which is found to be influenced by it, from experiments that have been made †, and which motion we know to be sympathetic only, and to be dependent on the impressions made upon the retina, and not upon any voluntary stimulus that we can give the iris itself.

I have not mentioned any of the theories that have already been advanced with regard to the action of these muscles, as it would extend my paper to a length that I am not desirous of doing; and they none of them affect the present views that I have put forth. My only wish is to endeavour to do away with some of the difficulties that exist with regard to the physiology of these parts, by offering what appears to me a simple explanation of the distribution of these nerves, by classifying the muscles according to their peculiar actions, and distinguishing between those which are sympathetic and those which are purely voluntary.

2, South Crescent,
Bedford-Square, Dec. 6, 1836.

* Vide Sir Charles Bell's papers on the Nerves.
† Mayo's Physiology.

CASES OF LOCAL HYSTERICAL AFFECTIONS.

To the Editor of the Medical Gazette.

Sir,

In perusing the excellent lectures of Sir B. Brodie, on Local Hysterical Affections, published recently in your valuable journal, my mind was forcibly impressed with the importance and correctness of that part wherein he alludes to the mistaken practice of referring the symptoms of hysteria to disease of the spine, and observes, that "in consequence of this unfortunate impression, numerous instances have occurred of young ladies being condemned to the horizontal posture, and even to the torture of caustic issues and setons, for several successive years, in whom air and exercise, and cheerful occupations, would probably have produced a cure in the course of a few months."

From among several cases which have come under my observation, which fully corroborate the justness of this remark, I will select two which occurred a few years ago, premising, that at the time of their occurrence I was engaged in an extensive practice in the country, where I had frequently seen the treatment of *condemning young persons to confinement in the horizontal posture*, made, as it were, a *hobby*, or a *fashionable practice;* being had recourse to without due discrimination, or deliberate investigation into the origin and progress of the more prominent symptoms of disorder, to the benefit of few, but to the serious inconvenience and injury of many.

I shall not relate these cases according to the order of time in which they took place, the second having occurred about two years prior to the first, my object being to exhibit the dangerous tendency and absurdity of the practice

in question, and then to display the advantage of an opposite plan of treatment.

Case I.—M. B., a healthy looking young woman, who had previously enjoyed an almost uninterrupted exemption from illness, and was employed as a dairy-maid at a large farm, where she had been frequently exposed to the vicissitudes of the weather, applied to me in consequence of suffering severely in her back, with inability to move from one place to another. Whilst motionless in bed she was comparatively free from pain, but she felt acutely when endeavouring to sit up, or to turn herself on either side. She referred the complaint to her getting wet through when milking, and continuing afterwards in her damp clothes, at a period when more than ordinary care was required. Considering the case to be an inflammatory affection of the sacro-ischiatic ligaments, partaking of the character of lumbago rheumatica, I had recourse to venesection, and directed her to have leeches applied to the part, and also gave her a saline aperient mixture, with colchicum. She was much improved by this treatment; but her employers, dreading the expense and inconvenience of her continuing with them, especially as she had no relations residing in the neighbourhood, had her removed to the parochial poor-house. The removal brought on a renewal and increase of the symptoms, for which I adopted a similar plan of treatment to that just mentioned, and subsequently employed cupping and blistering as topical remedies, and gave her a mixture composed of the liq. ammon. acetat., misturæ camphoræ, and pulv. ipecac. co. (in the proportion of six grains of the latter to a dose) three times a day. Considerable amendment ensued, and there appeared a probability of her being soon enabled to leave the house, and return again to service. She was, indeed, so far recovered, that I discontinued seeing her oftener than once in two or three days. Calling one morning with the expectation of finding her below, engaged in some light occupation, I was desired to walk up stairs, where I found her in a *horizontal posture* on a mattress; and was informed that some ladies had been to see her, who had sent another medical man, and he had given directions for her *continuing in that position for twelve months.* As my term for attending at the house was nearly expired, and the practitioner who had given these orders would in a few days become the parochial surgeon for the ensuing year, according to previous arrangement, I made no comment upon the affair in the presence of the patient, but in conversation with the Master of the house, who expressed his regret that I had been treated, as he expressed it, "so unhandsomely." I requested him to inform the parties that they had acted *incorrectly*, in placing the patient under another surgeon, and having the treatment altered, without making me acquainted therewith; and I also added, that the treatment he had adopted would, if continued, prove injurious to the welfare of the patient.

In alluding to the ladies, whom I represented as acting "incorrectly," I had no intention of reflecting upon their conduct in a general way; it was solely concerning what has frequently proved a source of great annoyance to the surgeon, as many of your readers have without doubt experienced—namely, the injudicious interference of recommending a favourite practitioner, or a peculiar or *fashionable* theory, to which some practitioners, from motives of self-interest (and contrary to their better judgment, if they acted honourably and consistently), are not unwilling to accede. As regards the ladies in question, I had many opportunities of witnessing their benevolence and humanity, which merited the highest commendation; but could not consider their knowledge of pathology sufficient to justify the representation of any who disapproved of a plan of treatment they recommended, as guilty of folly or ignorance.

At different times subsequently I inquired respecting the progress of the case, and was informed that the patient did not improve, but appeared to be gradually declining in health. At length, about nine or ten months from her being *condemned to the horizontal posture*, a surgeon from a neighbouring town was requested by the same ladies to see her, who at once declared the plan of treatment which had been adopted was in every respect wrong, observing, that she ought not in the first instance to have been submitted to it, as she did not appear to have had any spinal disease whatever; and that the only remaining

chance for her recovery was an immediate removal to a more airy and cheerful situation, where she could have the advantage of easy or gentle exercise, if able to bear it, with other means for invigorating her debilitated system, which appeared to be sinking under the effects of consumption. This far more correct and rational plan was adopted; but too late. I called upon her after her removal, at her request, and found her hectical, emaciated, and gradually yielding to that fatal disease, phthisis, to which she fell a victim in a few weeks.

Case II.—It was, as above stated, about two years before the occurrence of the preceding case, that, in corresponding with a young surgeon who had been my pupil, in one of his letters he mentioned several particulars relating to a young lady, whose parents resided in the town in which he was then living as an assistant, in whose welfare he felt a lively interest. She had been labouring for some time under considerable debility, with occasionally severe pain in the inferior dorsal and lumbar vertebræ. Several practitioners had been consulted, and amongst others a celebrated physician in a neighbouring city, and also a surgeon to a county hospital, a man of considerable experience, and of acknowledged and well-merited reputation. By these she had been directed to be confined to the horizontal posture for a period of not less than nine or twelve months. "Knowing your views concerning similar cases," observed my correspondent, "I have to request your giving me your sentiments upon this." In my reply, I advanced my reasons for concluding the opinion was erroneous respecting the local affection, and the treatment recommended. My letter was read to the parents of the young lady, and as they entertained great dread of her being confined for so long a period, I was solicited to take the earliest opportunity of seeing her. In accordance with their request I visited her (at the distance of thirty miles), and, after a deliberate investigation into the general symptoms and local affection, gave, as my decided conviction, the opinion, that there was not any disease existing in the spine, and that the pain and tenderness experienced in that part did not result from any disorganization of the vertebræ, or of the intervertebral cartilages, but was merely sympathetic, or dependent upon general or constitutional disorder.

The plan of treatment I advised was that of endeavouring to improve the system by tonic medicines, diet of a nutritious or invigorating quality, and gentle exercise in the open air, with the occasional use of the shower-bath and flesh-brush. The season of the year was favourable to recovery, it being early in the summer; and I was gratified by the result; for in the space of two months she was so far recovered as to be able to visit a relation above a mile from the town, walking all the way; and was soon after perfectly restored to health. The subsequent history of this case has been truly satisfactory. My patient has since that period enjoyed good health, with an exemption from the local disorder. She afterwards married the young surgeon, who is now in excellent practice in one of the principal cities in the west of England; and she has become the mother of five fine and healthy children.

I shall forbear an extended comment on these cases, as it is probable similar ones have come before the observation of many of your readers. The first I consider as an exemplification of the evil effect of pertinaciously adhering to mistaken theory, and the second as a happy illustration of the good resulting from a departure from theoretical opinions (as regards any peculiar method or plan of treatment), notwithstanding they may have obtained sufficient public approbation to render them what has been denominated popular or fashionable, or to have been recommended by some of the most eminent members of the profession. Had the first been allowed the use of her limbs, and occasional exercise without fatigue, in all probability she would soon have obtained a restoration to the enjoyment of health; and had the second undergone her nine or twelve months' confinement to the horizontal posture, it is not unreasonable to conjecture that she would not, as she is at present, have become the healthy parent of a fine and healthy progeny.—I am, sir,

Yours very respectfully,

J. F. Hulbert.

6, Trinity Square, Southwark,
Dec. 8, 1836.

CURE OF AN OPEN CANCER OF THE BREAST.

To the Editor of the Medical Gazette.

Sir,

In the number of your journal published on the 15th Oct. a very brief account is given of a case of cancer of the mamma, treated last spring in the Glasgow Infirmary with hydriodic acid. Through the kindness of Dr. Craig, High-Street, under whose care the patient now is, I have procured the following history of her case, subsequently to the time of her being dismissed as incurable from the Infirmary. I consider myself in some degree bound to publish this history, in consequence of its being in direct opposition to the very unfavourable prognosis recorded in your journal; and Dr. Craig and myself concur in thinking that it will probably not be read without interest by your professional brethren. I extract the original case from the Infirmary Journal (see Journal for 1836, Ward No. 8, pp. 131, 132, and 139), and shall add the subsequent history and an account of the present state of the disease.

Janet Herriot, æt. 40, married. Calton, Jan. 21, 1836.—About three years ago first observed a small tumor, about the size of a common pea, situated at base of nipple of left mamma. It gradually increased in size, its growth being accompanied by occasional attacks of lancinating pain. It now occupies about one-half of the gland, being about two inches and a half in diameter. It is hard, and pretty regular in its form, and moves freely on the pectoral muscle. Three weeks ago the skin surrounding the nipple became chapped and ulcerated. Ulceration has spread considerably, sore now measuring about an inch and a half in diameter. The nipple has been absorbed, and surrounding integuments are of a livid hue. Eight days since had a rigor, followed by pain, swelling, and redness along the lower border of the pectoral muscle, and slight enlargement of axillary glands. Since this attack, pain and uneasiness have much increased, and have been accompanied by a degree of feverishness. Health previously good; tongue whitish, somewhat florid at tip; bowels costive; catamenia regular, and always preceded by increase of pain of breast.

Loco dolenti admoveantur Hirud. x. et postea Cataplasma. Cras m. s. Ol. Ricin. ℥i.

February 13th. — Inflammation of lymphatic glands having been subdued by leeching, and a consultation having sanctioned the removal of tumor, should patient desire it, the day for operation was fixed, but it was not performed, in consequence of a slight attack of erysipelas: redness of surface now gone, but there remained under skin covering pectoral muscle several hard lines, size of whip-cord, and a gland above clavicle is now felt hardened and enlarged.

Sum. ter indies Acid. Hydriodic. Liquid. ℥ss.

March 26th.—Has used hydriodic acid since last report. No change in glands of axilla and above clavicle; tumor of mamma larger, and ulceration deeper, more extensive, and very foul. Little change in pain, though for the last two days it has been aggravated; pulse 84; general health pretty good.

Dismissed, with advice to use hemlock poultice, &c. &c.

November 11th. — The patient now resides in New Vennal, and is better known by the name of Mrs. Williamson. According to the account she gave yesterday to Dr. Craig and myself, for about three months after she left the Infirmary the sore of breast continued to increase in size, and her general health to decline. When the sore was at the largest, it was as broad as the mouth of a tea-cup, and very deep: it had the same foul appearance as when she left the hospital, and yielded a thin dark-coloured discharge, which she compared to moss-water, and which was so profuse as to soak through the dressings, and keep her clothes constantly wet: the fœtor was loathsome to herself and all around her. At this period she had an attack of dysentery, which reduced her strength to a very low ebb, and dried up the sore; but on the dysentery subsiding, the discharge returned. About ten weeks ago she was recommended by a friend to apply citrine ointment, and after various unsuccessful attempts to procure what she considered the genuine ointment (for she was particularly warned against a *bastard* kind of it), she succeeded in

procuring from Dr. Craig an ointment with which she was satisfied, and which was the unguent. citrin. dilut. of the Edinburgh Pharmacopœia. On the application of this ointment, the sore began to improve; it was a good deal better when Dr. Craig first saw it, and from that time the filling up and cicatrization of the sore have gone on without interruption. The patient ascribes her cure partly to the ointment and partly to her *good nature*, which she says she was always confident would carry her through.

On examining the breast, the cicatrix left by the sore was found to be about two inches in diameter, indurated, and quite flat. No ulceration could be perceived upon it, but in the centre there was a thin crust, which, according to the patient, consisted of the ointment applied, but which seemed, in part at least, to be formed by an exudation from beneath. The surrounding parts seemed quite healthy. Several of the axillary glands were enlarged; one of them, in particular, was as large as a chesnut, and very hard. No trace of the enlarged lymphatic vessels, or of the gland above the clavicle, could be discovered. No pain or any other uneasiness is felt, either in the breast or the axilla. Her general health is perfectly good; strength quite restored; tongue clean, and pulse natural.

The preceding case is interesting, as establishing that a genuine cancer of the mamma does admit of being cured, to whatever circumstances the cure is to be ascribed. That the disease was really cancer no doubt can be entertained. The period of life at which the tumor occurred, its progress, and, above all, its characters cognizable by sight and touch, were such as could leave no doubt in the mind of any person in the habit of examining such cases, as to the true nature of the disease.

At a full consultation held upon the case, no difference of opinion was expressed as to the nature of the disease; but, as very often happens in the advanced stage of cancer, while one-half of the gentlemen present recommended that the woman should be allowed to die in peace, without being subjected to the pain of an operation, which they thought would only accelerate her fate, the other half considered it right to give to her whatever chance of life excision might hold out.

If any further evidence of the truly cancerous nature of the disease were required, it is unfortunately still to be found in the state of the glands of the axilla, which, I regret to say, have too much of the characters of cancer. That these glands will not hereafter give trouble, and that the woman can be considered as free from all risk of a recurrence of the disease, it would be rash to predict. All that can be said, in the meantime, is, that a cancerous sore of the breast, instead of going on from bad to worse till the destruction of life, after spreading to a certain size began to improve, and ultimately healed, the patient at the same time recovering her health and strength.

With respect to the remedies which were used, the patient took the hydriodic acid internally, and had poultices and citrine ointment applied to the sore. The hydriodic acid was begun soon after the ulceration commenced, and was continued for forty-two days; the quantity of iodine taken being 2460 grains. The iodine appeared as usual in the urine, but never could be detected in the discharge from the breast. The poultices were applied during the early stage of the ulceration, and the citrine ointment was not resorted to till after the sore had spread to its utmost extent. What share these remedies had in the cure which was effected, or whether they had any share in it, cannot be determined by the result of a single case. Farther experience of their effects is therefore required; and while the acknowledged inutility of all other remedies will operate as an inducement to make fresh trials, it cannot fail likewise to cast doubt in the meantime on the probability of their success.—I remain, sir,

Your very obedient servant,

ANDREW BUCHANAN.

Glasgow, 110, St. Vincent-street,
Nov. 12, 1836.

"WHICH ARE THE NERVES OF TASTE?"

—NOT YET DETERMINED.

To the Editor of the Medical Gazette.

SIR,

IN a late number of the MEDICAL GAZETTE* you have given insertion to a

* Present vol. p. 225.

paper by Dr. Alcock, of Dublin, wherein the author assumes to have determined the question relative to the nervous connexions of the sense of taste. I propose to offer a few remarks upon the inferences which have been deduced from the experiments narrated in this paper, inasmuch as it appears to me that they are by no means warranted by the premises, and that, as some of them are totally at variance with recognised *principles* in physiology, we must look for evidence of a much more decisive character, before Dr. Alcock can be allowed to have determined the question "which are the nerves of taste?"

Dr. Alcock, at the conclusion of his paper, observes—"I feel justified in drawing the following inferences from the experiments and reasonings which have been detailed: 1st, that taste is a special sensation; 2d, that it enjoys two media of perception; 3d, that its media of perception are the glosso-pharyngeal nerves, and the lingual and palatine branches of the fifth nerves; 4th, that the glosso-pharyngeal nerves are not its special media; 5th, that the latter nerves both are sentient, and influence muscular action; and 6th, that the spheno-palatine ganglion and chorda tympani, have no influence upon either the existence or perception of the sense."

With the first of these propositions I shall certainly not find fault; but I deny that it is proved by the experiments of Dr. Alcock. It appears to me that, if we may rely upon the accuracy of his data, "taste" is *not* a special sensation, inasmuch as it is dependent upon no *special* nerve, but associated with two nerves whose main functions, according to Dr. Alcock, are, the one for "muscular action," and the other for "common sensation;" just as if these nerves disposed of a little superfluous endowment to produce the sense of taste. However, that taste *is* a specific sensation, and not a modification of the common tactile sensibility of the tongue, I consider to be fairly established; I believe the conclusion to be fully warranted by certain cases, with experimental investigations, observed by the present writer, first published in the Medical Gazette, and afterwards appearing in some of the Continental and American journals. I assume no originality in having long doubted the accuracy of the popular doctrine that taste was only a modification of common sensation; but, until it shall appear that I have been anticipated in my observations, I must claim priority in having *demonstrated*, by the best kind of evidence, that "taste is a special sensation."

If reference be made to the Medical Gazette of Oct. 25th, 1834, a paper of mine will be found, wherein the following conclusions are assumed to be warranted, from previously recorded experiments upon a patient labouring under one of the forms of facial paralysis, "that whilst the common sensation of one half of the tongue was annihilated, the sense of taste was unimpaired. Does not the above case decide that taste is something more than a modification of common sensation? And if so, must it not, as in the case of smell, be dependent upon a specific nervous supply?"

In the Gazette of Nov. 21, 1835, another case of facial paralysis, which I had investigated, was published, and the following remarks occur towards the conclusion of the paper.—"These experiments were considered to render it clear that, in this case, whilst the common sensibility of the left half of the tongue was but little impaired, its specific feeling was lost."

These cases, then, manifesting, in one instance, loss of feeling with maintenance of taste, and, in the other, loss of taste with maintenance of feeling, it will, I think, be generally allowed that the inference which I have always drawn from them is warranted; and I regret that in *assuming* to have determined, amongst other things, that "taste is a special sensation," Dr. Alcock has not had the candour to refer to what had been previously offered to the profession by myself. He may certainly have been unacquainted with the full share which I have had in the discussion of this question, though it is somewhat singular that he should have shewn himself to be well acquainted with some of my *suggestions*, and yet be in ignorance of the *facts* with which those *mere* suggestions have been accompanied.

I remarked at the outset of the present communication, that some of Dr. Alcock's inferences were at variance with principles generally recognized in physiology. The proofs of this may be

demanded. Is it not, then, a recognized principle in the physiology of the nervous system, that a simple and special function must have but one simple nerve for its manifestation? and, reciprocally, that a nerve whose origin is simple, can subserve one function only? Let Sir C. Bell, and other leading authorities, decide this point; a reference may readily be made to their works. Well, but Dr. Alcock infers, in the second place, that taste, which he allows to be a *special* nerve, has *two* media of perception; and, thirdly, that these media are the glosso-pharyngeal nerves and certain branches of the fifth pair; and, fourthly, that the glosso-pharyngeal nerves are not its *special* media, though nerves of a special sense; and, fifthly, that the latter nerves (whose simplicity of origin is not questioned) perform two functions—the functions of both motion and specific sensation.

Without proceeding farther, has not enough been said to shew the inconsistency of Dr. Alcock's inferences with some of the best established principles in physiology? But it will be contended, that if *facts* disprove the correctness of such principles, these latter must be modified so as to accord with the facts. Most assuredly; such reasoning is unexceptionable. But the accuracy of the facts themselves must first be established; and that Dr. Alcock's paper furnishes the proofs of such accuracy, most, I conceive, will be inclined to disallow. I do not, however, propose to examine seriatim, and in the detail, the various proceedings which were adopted in this gentleman's experiments; but I protest altogether, and in the wholesale, against the possibility of coming to certain conclusions, upon such a subject, by mutilation of living animals. So far as such experiments could be considered to have proved any thing, those of Panizza demonstrated that the glosso-pharyngeal was the nerve of taste, to which conclusion no argument from analogy could be opposed; but shortly after the publication of their performance they were repeated by Mayo, and with contrary results. And again, Dr. Alcock's experiments would prove Panizza and Mayo alike to be both right and both wrong. I must reiterate, the whole procedure, as a means of "determining" the question, is, in my own humble judgment, unsound and fallacious.

It is to pathology, and to morbid anatomy, that I look for the ultimate settlement of this matter. Pathology, I consider, has proved that taste is a *special* sense, and I expect that morbid anatomy will hereafter reveal its *special* nerve.

I am, sir,
Your obedient servant,
DANIEL NOBLE.

Manchester, Nov. 29, 1836.

PREPARATION OF BROMIDE OF IRON.

To the Editor of the Medical Gazette.

SIR,

I HARDLY know whether I am correct in troubling you with the following reply to Mr. Squire's note, in the GAZETTE for last week; indeed, the relative merits of the bromide and iodide of iron are not of sufficient interest to justify any lengthened consideration of the matter in a periodical which has always subjects of vastly higher importance to introduce to its readers.

The decomposition of the bromide of iron will be exactly proportionate to the purity of the preparation, and this will depend mainly on two circumstances—the state of the iron which is made use of, and the accuracy of the manipulation.

With reference to the first, I beg to remark that the use of iron filings is extremely objectionable, even when separated by the magnet; not that I can suppose that a wholesale drug-vender would even make use of this simple artifice to produce a pure article. To obviate any chance of impurity from the iron, I have directed fine iron wire, in the form of a coil, to be used.

There is also an important point to be observed in the manipulation. In evaporating the solution, a very gentle heat must be used, or the bromine will be separated in the form of gas.

It is to a preparation made with these precautions that I alluded when I stated that it could be kept in a state of solution for weeks, without any appreciable decomposition taking place. I had made a series of careful experiments before I presumed to send you my paper,

some of them verified by repetition, under very unfavourable eireumstanees; and as to any attempt on the eredulity of your readers, no man, with any elaim to sanity, would, with such an object, have communicated his name and address.

A eoil of wire will certainly render the solution of the iodide less liable to decomposition, but a coil of wire cannot be sent in a mixture to a patient. The solution of the bromide needs no such precaution, if *originally well prepared.*

I must again apologize for even giving you the trouble of reading this; in fact it is a matter of perfeet indifference to me, whether the iodide or bromide be preferred. I had observed certain advantages oceur during the administration of a therapeutical agent, and having good reason to suppose that the benefit and medieinal preparation stood in the relation of cause and effect, I felt justified in recording the same, with the hope that publicity would elicit truth.—I have the honour of subscribing myself, sir,

Yours very respeetfully,

GEORGE KEMP.

Cheshunt, December 6, 1836.

P.S.—Mr. S. speaks of the coil of wire keeping the solution in a *neutral state;* the faet is, that what, for brevity, I have called a *bromide* of iron, is a *per-bromide.*

EXTRAORDINARY ACCUMULATION OF FÆCES IN THE LOWER PART OF THE RECTUM.

By JAMES HEYGATE, M.D.
M.R.C.S. London, and Physician to the Derbyshire General Infirmary.

An oceurrenee of the following nature, at least to the extent mentioned, does not frequently happen, and when it does it must be attributed to neglect. The only practieal advantage to be gleaned from its reeital, is to put physieians on their guard should a like oeeurrenee befall them. Much distress is often experienced by elderly bedridden patients from a similar, though lesser evil, of this sort; many of whom are not able to describe their own feelings. Whenever, therefore, they suffer from obstinate constipation, and where the administration of active aperients only increases the distress, it is most important to ascertain the state of the rectum, and see whether some insuperable barrier, in the shape of hardened fæces, do not present itself. The ineffectual attempt of the nurse to introduce an enema pipe has frequently been the first indication of sueh a cause.

Mrs. S. between 60 and 70 years of age, (who had been for some time previously bedridden) told me that for some days she had suffered most exeruciating pains in the lower part of the reetum, which came on at tolerably regular intervals, assuming preeisely the character of the pains of parturition. I questioned her as to the state of her bowels, and she told me that they were quite open, and that frequently some loose evaeuation came away; this led me to suppose that the pains might be produced by some peculiar irritation, or ulceration, &c. As she was very reluctant to be examined, I preseribed some medieine caleulated to relieve pain. I was however summoned early the next morning, and told by the daughter that her mother had had a most dreadful night, with "the forcing down pains." Having now acceded to an examination, I immediately found that an immense hard, dry ball of fæces, was making fruitless though strong attempts to pass the anus, which was greatly dilated; so mueh so, as to be compared to nothing better than the os uteri, when pressed upon by the eaput of the deseending fœtus, and dilated to the size of a crown pieee or more.

Mrs. S. being very thin, and the surrounding parts greatly attenuated by pressure, I could with my fingers distinetly trace the size of this hard ball, the form and cireumferenee of which, was, without exaggeration, similar to the head of a full-grown fœtus.

Notwithstanding her exhausted state, nature had made most extraordinary efforts to dilate the anus sufficiently to pass this hard ball of clay, which it resembled both in eolour and consisteney. After ascertaining as nearly as possible the extent of the accumulation, I with the handle of a tea-spoon (having no better instrument at hand) with some diffieulty broke down the mass and brought it away piece-meal, and then ordered an enema to be administered,

which effectually removed the remainder. Strict injunctions were enforced, calculated to prevent a recurrence of this evil.

I ought to have said, that on examination, some loose feculent matter was found to pass with the pains—it escaped round the sides of the ball. This apparent action of the bowels prevented, in the first instance, all suspicion of the cause of the ailment, and deceived both the patient and myself.

Derby, Nov. 10, 1836.

THE METHOD OF OBSERVING THE TUBULO-FIBROUS STRUCTURE OF THE BRAIN.

To the Editor of the Medical Gazette.

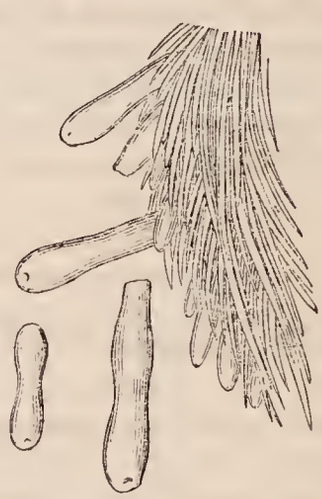
Sir,

The admirable discovery of Ehrenberg, of the fibrous structure of the brain, not having been observed in this country, it may be interesting to many of your readers to learn in what manner it may be seen; for even as a microscopic object, a more beautiful and delicate one I have not examined, while, in a physiological point of view, its high importance is evident to all.

The brain which I examined was that of a sheep, which had only been killed about half an hour; it had been immersed in weak spirit, which corrugates it, and should not be used; it must, however, not be allowed to dry.

Exp. 1.—I cut a thin transverse section of the *tractus opticus**, and placed it, with a little water, between two slips of glass, using a slight pressure. When this was placed under the microscope, charged with a power equal to a single lens of one-twentieth of an inch focus, the whole appeared as composed of a granular amorphous mass, surrounded by a thin transparent membrane. On more attentive examination, the particles appeared to me to consist of short broken fibre, but the evidence was not sufficient to come to any positive conclusion; though I felt convinced they were not globular.

Exp. 2.—I now carefully cut out a small longitudinal piece from the same part of the brain, laid it on a slip of glass with a little water, and covered with a *very thin* plate of mica; *avoiding even the slightest pressure.* Under the same amplification the edges appeared irregular, but no fibrous characters could be discovered. I now charged the instrument with a power equal to a single lens of one-fiftieth of an inch focus; using a fine achromatic object glass, with an aperture of 55°. I could now distinctly see fibre (indeed the whole mass appeared composed of it), but I could not decide whether it was tubular; nor was the evidence sufficient to say whether they were of uniform diameter throughout their length. On placing a diaphragm, with a condenser, behind the stage of the engiscope, to direct the light properly through them (an arrangement always advisable for the examination of cylindrical bodies*), I was enabled, without altering the power, to see the enlargements at certain intervals, and also to determine that the fibre was tubular, as shewn in the figure. The tubes near the edges having separated, their structure was quite evident.



The diameter of the constricted parts, I find, varies from 1-1500th to 1-1800th of an inch.

Hoping the above will be useful in enabling others to verify this valuable discovery, I remain, sir,

Your obedient servant,

Andrew Pritchard.

263, Strand, Dec. 7, 1836.

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* Mr. Lomas kindly furnished me with the brain.

* See Microscopic Cabinet, p. 155.

ACCOUNT OF THE LATE CASE OF

POISONING WITH UNSOUND BACON.

To the Editor of the Medical Gazette.

Sir,

I beg leave to correct two mistakes into which the reporter for the *Times* has fallen, in his account of the inquest on the body of Caroline Jones, whose death, the jury were of opinion, was occasioned by eating diseased or unwholesome bacon, and which report has been transferred to your columns. The medical witness on the occasion was myself, whilst in the report he is described as "Mr. John Thomas, surgeon to the hospital." Again, in the evidence of Richard Jones, the father of the deceased, a mistake occurs. Instead of "the *servant* had gone out with a younger child," &c., it ought to have been, "the *deceased* had gone out," &c.

As the case is one of some interest and importance in a medico-legal point of view, and as the medical history, as given in evidence, was necessarily brief and defective, I take this opportunity of furnishing you with a more detailed account of the symptoms and *post-mortem* appearances.

I was gratified to find that the view which you have expressed of the case in your editorial capacity, is the one that seemed most satisfactory to my own mind, although I must observe that, at the dissection, there were some gentlemen, including one of the physicians to the hospital, who regarded the appearances as the result simply of continued fever, with severe abdominal complication. These gentlemen, however, had not, I believe, watched the progress of the case. On the other hand, it has been, and I think not without reason, suggested, that the severity of the symptoms was such as to lead to the idea of a mineral, rather than an animal poison; and allusion was particularly made to the possibility of the bacon having been cooked in a dirty copper vessel. At my suggestion, therefore, particular inquiry was directed to this head at the inquest, but there did not appear to be the least ground for supposing that any mineral poison had been introduced into the meat, either by carelessness, accident, or design.—I am, sir,

Yours very respectfully,
John Thurnam.

Westminster Hospital,
Dec. 11, 1836.

Caroline Jones, aged 14, was admitted into St. Margaret's Ward, Westminster Hospital, November 8th, as a patient of Dr. Bright. She complained of extreme pain in the epigastric and right hypochondriac regions, which was greatly aggravated by pressure, with almost constant and profuse diarrhœa; some tenesmus; evacuations fluid, watery, and deficient in biliary matter. There was considerable emaciation; countenance generally pale; centre of each cheek flushed; features expressive of intense suffering, being drawn into a sardonic grin. She lay in bed on the right side, with the knees drawn up to the abdomen. Skin rather hot and dry; tongue very dry, covered with a thin brown coating; lips parched, and rough; pulse very frequent, small, and wiry; thirst excessive.

App. Hirud. xx. regioni Hypochond. dext.

℞ Hydrarg. c. Creta, gr. v. Pulv. Ipecac. Comp. gr. vij. M. ft. pulvis statim sumend.

9th.—℞ Pulv. Cretæ Co. 3j. Hydrarg. c. Creta, ℈j. Pulv. Ipec. Co. 3ss. M. ft. pulveres, viij. Capt. j. ter quotidie.

This treatment was persisted in, with but very temporary relief; the leeches, in diminished number, being repeated at intervals of from two to seven days. One of the most prominent symptoms at this period was the extreme thirst; the quantity of milk and water, of barley and toast-water, that she consumed, being excessive.

19th.—Rep. Hirud. viij.

℞ Hydrarg. Submuriat. gr. j. Opii, gr. ¼. M. ft. Pilul. ter quotidie sumend.

22d.—App. Emp. Canth. Epigast.

A day or two after this a little improvement appeared to be taking place; the pain became less severe, and, indeed, gradually left her, but she still suffered from extreme tenderness. The countenance became less expressive of suffering, and the cheeks less flushed; the tongue was cleaner, and the appetite improved so much that she asked for animal food, and was allowed a mutton-chop. The pulse became fuller, softer,

and less frequent. The diarrhœa still continued, but in a less severe degree.

About the 29th or 30th of November she was rather suddenly taken worse; the pain and tenderness upon pressure returned with increased severity; every symptom was greatly aggravated; slight delirium came on; the countenance was anxious and sunken, the features being occasionally distorted; some strabismus was noticed occasionally. Emaciation made great progress, the powers of life gradually sank, and she died Dec. 2d.

Inspection of the body, 16 hours after death.—Brain healthy. Thoracic viscera free from disease, with the exception of a few crude tubercles dispersed through the lungs, which organs were also rather congested.

Abdomen.—The stomach contained from one to two pints of a rather thick glairy fluid, consisting of coagulated milk, bile, and mucus; its tunics were rather attenuated; the mucous lining soft and grey, having a layer of viscid mucus adherent to it. There was obviously increased vascularity of this organ, chiefly affecting the capillaries and smaller arterial branches of the cul de sac, and greater curvature. The duodenum was considerably dilated, with decided thinning of its parietes; its mucous surface had a regularly mammillated appearance, dependent apparently upon hypertrophy of its mucous follicles; there was also a diffused blush of redness in this membrane. No farther morbid appearances were detected in the small intestine, until approaching within about twelve inches of the cœcum, when irregularly-shaped patches of ulceration were met with in the mucous membrane; these were seated chiefly in the side of the gut, opposite to the attachment of the mesentery, and became larger, and deeper, and more numerous, as the cœcum was approached. Ulcers were also met with in the ascending and transverse portions of the colon, but the remainder of the large intestine, including the rectum, was healthy. One of the ulcers in the ileum, situated in the angle formed by that gut with the cœcum, had produced a perforation of the canal, and this had led to a peritonitis, affecting the serous covering of the lower half of the abdominal viscera, these being covered in many places with flakes of recently-formed false membranes, and about half a pint of sero-albuminous fluid being present in the pelvic cavity. The mesenteric glands were enlarged, and presented an increased vascularity; upon being cut into, they reminded one most of the character of a fine erectile tissue. The other abdominal viscera did not present any abnormal appearances.

THE *LANCET* WISEACRES ON INCISION OF THE PERINEUM IN LABOUR.

To the Editor of the Medical Gazette.

Sir,

That the Editor of the Lancet is blessed with a due number of dull correspondents the columns of that publication leave us no room to doubt; but we were charitably enough inclined to consider the insertion of Mr. Rolland's letter as a mere oversight, and laughed at the blunder accordingly; for we considered the letter itself a sufficient indication of the state of the writer's mind, nor for a moment imagined that a production in which there is neither a connected sentence nor a sane idea, could have called forth a reply. It appears we were wrong.

The serious refutation of poor Rolland's proposition by two separate correspondents in the Lancet, is too absurd an affair to be altogether passed over in silence. The sombre gravity of the former of these obstetric Quixotes is irresistibly comic; nor is the triumphant self-gratulation of the second less ridiculous. This latter hero informs us, in a note, that in the Army the opportunities of obstetric observation are necessarily rare. What can the man mean?

We recommend the Editor of the Lancet to suppress the names of his future contributors from *Fort Clarence.*

We remain, sir,
Your obedient servants,
Two or Three.

Fort Pitt, Chatham,
Dec. 12, 1836.

[This letter has been duly authenticated. It may be necessary for the information of our readers to add, that Mr. Rolland's, of *Fort Clarence*, suggestion was to divide the perineum at once whenever it offered any obstacle in parturition! Fort Clarence, it is well known, is the place where officers of the Army, who are "under observation," are confined.—Ed. Gaz.]

PHYSIOLOGY OF SALIVATION.

To the Editor of the Medical Gazette.

Sir,

Permit me to offer a few remarks on an article entitled the "Physiology of Salivation," which appeared in your number for Nov. 26, 1836.

The author, in explanation of this phenomenon, proposes a theory which is novel, and somewhat ingenious. It may be briefly stated thus:—The pancreas stimulated to increased action by the internal administration of mercury, pours forth in profusion its peculiar secretion. After a time it falls into a state of atony, and is unable to secrete even its usual quantity. But the full amount of pancreatic fluid is elaborated in the blood. To prevent the ill effects which would arise from its accumulation, the salivary glands, already unusally excited by mercurial stimulation, take on increased action, and pour forth the pancreatic, or some analogous fluid. This is the physiology of salivation.

Of the many objections which might be urged against this theory, it is sufficient to mention two. 1. Salivation may be excited by mercury applied externally, long before the chain of sequences supposed above can be established. 2. The pancreas is regarded by physiologists as analogous in structure and functions with the salivary glands. Admitting, then, that exaltation of the action of an organ is followed by depression, the salivary glands having suffered during salivation from continued excitement, will, after a time, become atonized, and probably the quantity of their secretion will be diminished. But, according to the above theory, the full amount of salivary fluid will be elaborated in the blood. Injurious effects would ensue from its accumulation; it must have egress through some channel. The pancreas, which now will have recovered its tone, seems well adapted for the purpose; it is roused again to increased action; but depression will follow, and the phenomena described above will be repeated. Thus there will be alternate discharges of salivary and pancreatic fluids for ever. This is absurd.

It may be objected to the case I have just proposed—that the pancreas had suffered no mercurial stimulation antecedent to its increased action. In the above theory it is not stated that such stimulation is the sole or necessary cause of exaltation of function.

It is easy to demolish theories—it is easy, even in the absence of facts, to substitute others in their room. Far be it from me to attempt the solution of a question so difficult as the physiology of salivation—a question which involves the inquiry as to the *modus operandi* of mercury on the human body.

I venture, however, to throw out a conjecture as to its *immediate* cause—a conjecture which appears to me to derive support from the order of supervention of the pathological conditions, and from analogical reasoning, which is just, and apparently conclusive.

The symptoms attendant on a case of salivation may be arranged in three divisions. They are developed in the following order:—

1. "Slight tenderness and tumefaction of the gums, which acquire a pale rose colour, except at the edges surrounding the teeth, where they are deep red. The mouth becomes sore; the tongue swollen.

2. The salivary glands become tender and swollen; the saliva and mucus of the mouth flow abundantly.

3. If the use of mercury be continued, aggravation of the 1st division of the symptoms; the gums slough, the teeth drop out, and there is necrosis of the alveolar processes*."

Distinct conditions are marked out by the first and second division of these symptoms. The 1st division indicates inflammation of the mucous membrane of the mouth; the 2d, inflammation of the salivary glands. It is evident, then, that salivation occurs subsequently to the inflammation of the buccal mucous membrane. Analogy favours the conjecture that this inflammation is its immediate cause.

What doctrine of pathology is more firmly established than this—that inflammation of glandular structures is often excited by irritation of the surface of relation with which they are in contact; for example, the lesion in duodenitis, the mesenteric glands in enteritis, &c. Can we refuse to apply this doc-

* Pereira's Lectures, Medical Gazette, vol. xviii., p. 388.

trine to the case in question? The analogy is too powerful to be rejected. Again; stimulants taken into the mouth induce temporary salivation; and finally, Bichat has shewn that stimulation exerted on the surface of relation with which glands communicate, is the natural mode of excitement of these organs.

The conjecture, then, that salivation is a consequence of inflammation of the mucous membrane of the mouth is not unfounded. This, however, advances us but a little way in our inquiry. The question meets us as to the cause of the development of this inflammation. To treat on this subject at length would require more space than I could presume to occupy in your journal.

I remain, sir,
Your obedient servant,
Z.

December 6, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Annales d'Hygiène publique et de Médecine légale. No. XXXII.

THE new number of the *Annales* contains several excellent articles, of some of which we can at present do little more than mention the names.

On Suicide, as it prevails at the present period, by M. Brouc, is an elaborate paper, in the composition of which the author has availed himself of extended and varied resources. The next article is M. Ratier's prize essay on the *Best means of arresting the spread of Venereal Disease.* After which we have *Memoirs* by MM. Rengi, Santi, and Kuhlmann, on different subjects of hygiène.

In the department of legal medicine, we have two able papers by M. Ollivier d'Angers and Professor Froriep, of Berlin, on the determination of the question—*What is properly to be considered a* new-born *Child?*—an inquiry extremely necessary to be made in reference to the French and German criminal codes. In this country a similar question might not improperly be proposed—What, strictly speaking, is *Infanticide?* — for, in accordance with legal phraseology, it might imply the murder of any person under the age of one-and-twenty. An interesting medico-legal report on a *Case of supposed Infanticide* is given by M. Schneider, of Fulda, communicated by M. Marc: after which comes a short case of *Supposed Poisoning*—but actual suicide, related by M. Boutigny. We are glad also to find that the Editor begins to look to our English books for material in this department: he has extracted from Mr. Alfred Taylor's "Elements" that gentleman's remarks on the *cause of death by hanging.*

These, together with the Varieties and Bibliography, make up a number of considerable value. We shall give a more satisfactory account of some of the contents hereafter.

A Medical Vocabulary; or, Explanation of all names, synonymes, terms and phrases, used in Medicine and Surgery, and the relative branches of Medical Science. By a MEDICAL PRACTITIONER. Edinburgh, 1836.

This is a very neat little manual, of which the junior student or general reader may avail himself with advantage. There is a deficiency of good word-books in our language, the two or three hitherto published being larger than need be, and not so complete after all as their goodly bulk would lead one to expect. The Vocabulary does not make great pretensions, but what it professes to be, it is—a useful book of reference for the student.

MEDICAL GAZETTE.

Saturday, December 17, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

PARENT-DUCHATELET'S WORK.

FURTHER OBSERVATIONS.

IT is the merit, or the demerit, of this singular work to have matter in it to attract every class of readers. The statesman (occupied only with serious

subjects), the careless lounger in the coffee-house, the grave physician, the idle profligate, the kind-hearted lover of his species, and the hardened in vice—all may find something in it to arrest their attention. This variety of information it is, together with the unreserved and candid manner of the author, which has given the last legacy of Duchatelet such vogue in the Parisian *salons*, and must confer on it notoriety, at least, wherever it circulates.

We gave a brief general view of the production in our last: in our present notice we shall confine ourselves to certain parts of it which are more immediately professional. The third and fourth chapters, for instance, are of this nature; treating expressly of physiological and pathological considerations respecting the prostitutes of Paris; also the sixteenth and seventeenth chapters, on the sanitary measures adopted by the French government in carrying into effect their extraordinary scheme of *organizing vice*, as it has been called.

Some of the questions discussed by the author, relative to certain bodily peculiarities of these public women, are curious, but their interest does not rest there: they involve some very intricate physiological considerations, and in that point of view are deserving of more particular notice.

Of this description is the account which is here given us of the plumpness —the *embonpoint*—of the *personnel* of prostitutes. Excessive fatness even is observed in a great number of these females, and many reasons have been assigned for that condition of body. The most common opinion has been, that it is occasioned by the repeated use of mercury; and several circumstances seem to have contributed to the notion. It has been seen, for example, how quickly women who have been reduced to extreme leanness by syphilis, have recovered their vigour and health after a mercurial course: it is observed also, that the fattest are among the oldest women of the town, and consequently of the number of those who have been most frequently under treatment; and the conclusion accordingly appears to be rigorously drawn. Nor have *physiologists* been wanting to countenance the supposition. Some have attributed it to the effect of mercury on the lymphatic system; and one wiseacre even went so far as to recommend that animals intended for the market should be fattened by a course of mercury!

Parent-Duchatelet inquired into the phenomenon without begging the question. He first endeavoured to ascertain whether it was a fact that those who took most mercury were most stout: and he soon found that there was no relation whatever between mercury and fatness as cause and effect. He even met with several instances of women who never had contracted syphilis, or who had not had the disorder for many years, yet were of extraordinary obesity. The true cause, as the author suggests, is to be found in the idle inactive life led by prostitutes, together with the abundance of aliment which they consume.

Another peculiarity is the *change of voice* noticed in certain prostitutes. A hoarse masculine tone is contracted, and it has been attributed by some to circumstances connected with their sexual habits—their loose profligate debauchery causing them to lose that delicacy of intonation properly belonging to the female. Our author is not satisfied with this explanation; though we confess we should require stronger reasons than he gives us before we would yield the impression we entertain that there *is* some connexion between the abuse of the sexual character, and the alteration of the vocal organs: his idea is, that it is owing to repeated drunkenness, and

the chills to which these unhappy wretches are exposed. Here, however, we doubt whether his conclusions have been gathered in his usual cautious manner.

We are obliged to pass over several curious subjects of inquiry—relative to the *colour of the hair* and *eyes* more or less frequent with prostitutes (considered of course as indicative of their temperament)—their stature and general appearance: these we must leave undisturbed in the volumes, to be explored by readers who take a special interest in such researches. Nor can we dwell on the remarks made by the author respecting the state of the sexual organs in the *prostituées*; the subject is one of much importance in a medico-legal point of view, but cannot well become a topic in our present summary of Duchatelet's labours.

There are few opinions more generally received in the medical world, than that of the *sterility* of prostitutes; but it does not stand the test of fact,—it proves to be an exaggeration. It is true that the number of accouchments which take place amongst them is much less than what might be expected from so many women of between 18 and 25 years of age; but when we find, on referring to the register of the Bureau des Mœurs, from 1817 to 1822, an average of about 51 accouchments annually, while at the Hôpital des Vénériens, at the prison, and the Maternité, the average is above 63, to which we should add the seven or eight deliveries which occur yearly at the private residences of some of the women,—who shall say that prostitutes are sterile? Nay, we ought to take into account a certain number of abortions likewise, not inconsiderable neither, but regarding which the statistical returns are not exact.

In treating of the diseases of prostitutes, the author notices—1, those maladies which are immediately connected with their mode of life; and, 2, those which are common to them with other women. Of the first description are, uterine hæmorrhages, tumors of the external organs, recto-vaginal fistulæ, cancer of the womb, convulsive diseases, and mental alienation. In the second category he places syphilis; and probably to many readers the details given respecting the latter disease will seem the most valuable in the whole work.

We gave some account last week of the police arrangements which exist in Paris relative to the registering and visiting the *filles publiques*. It may be proper to add some further particulars regarding the mode in which the visits are managed. They are conducted by the physicians of the dispensary in three different ways:—

1. The most general practice is for the women to come to the dispensary to be inspected; this they are obliged to do twice a month. The act of inspection is performed with great adroitness: the person examined is placed *sur un fauteuil élevé à dos renversé*. Each medical attendant may thus *visit* 25 women in an hour, entering the results of his observation at the same time in the registers.

2. At the establishments of the *dames de maison*, visits take place once a week, or four times a month. Each medical man belonging to the dispensary has his particular district. The hour of visiting being fixed, all the women are obliged to be present. The results of the inspection are recorded as in the former case.

3. Another system of visiting takes place at the *depôt* of the prefecture of police. This depôt is a sort of prison, perhaps somewhat resembling our station-houses. It is a temporary place of detention for persons taken up during the night for robbery, breaches of the

peace, &c.; and among the prisoners are generally found a number of *filles publiques*. These are lodged in a separate room; and it is customary not to suffer them to leave the place till their state of *health* is ascertained. The practice is the more necessary, as these prostitutes are often found to belong to the class denominated *insoumises*, and who have thus escaped regular inspection previously. A surgeon from the dispensary, therefore, makes his visit to the depôt every morning, and enters the particulars in his journal.

Such were the sources from which M. Parent-Duchatelet drew his statistics of syphilitic disease. From the dispensary registers in particular he was enabled to gather facts demonstrative of the frequency of venereal, as well as of those conditions of the women most apt to contract it. The following table will show some of the results. Suppose we desire to know the frequency of venereal maladies occurring in the whole prostitute population of Paris, comprising those in the prisons and hospitals, we have the following proportions:—

		Infected.
In 1812	average	1 in 28
1813	...	... 21
1814	...	... 19
1816	...	... 25
1817	...	... 32
1818	...	... 38
1819	...	... 44
1820	...	... 44
1821	..	... 52
1823	...	... 39
1824	...	... 33
1825	...	... 32
1827	...	... 27
1828	...	... 25
1829	...	... 29
1830	...	... 33
1831	...	... 29
1832	...	... 47

It will, however, be desirable, in order the better to comprehend the results of the sanitary surveillance, to observe separately the returns made for those women who live in the *maisons publiques*, as well as for those who though living *isolées*, have always been under observation.

	In Maips. ubl.	Isolées.
1812	1 in 20	1 in 39
1813	... 13	... 32
1814	... 9	... 28
1825	... 8	.. 25
1826	... 9	... 23
1828	... 11	... 42
1829	... 22	... 57
1830	.. 33	... 57
1831	... 28	... 43
1832	... 26	... 60

How very different these results appear! At first sight it would seem as if the women in the *maisons publiques* were by far the more infected set, and the more dangerous, as tending to spread the disorder. But, as Parent-Duchatelet observes, there are a considerable number of the *isolées* to be deducted from the account—those, for example, who are more properly thieves (*voleuses*), who use the veil of prostitution only for the purpose of carrying on their trade more successfully—also another class "ces vielles filles laides décrépites et degoûtantes, qui se designent sous le nom de *manuelles*, et qui, par la nature de leur actes, sont tres rarement exposées à contracter la maladie venerienne." Such are many of the *isolées*. We should also add, that the girls of this class are visited at longer intervals than the others: they may not be inspected for 20 or 25 days together—while the *filles* of establishments, as we have already stated, are examined regularly once a week.

Among the *insoumises* the population of the infected is enormous, varying from 1 to 5 or 6, to 1 in 3, and even 1 in every 2, annually! How strongly does this at all events justify the expediency of a surveillance!

We have only room for one or two more facts regarding the syphilitic infection. During the month of April,

1832, while the cholera raged in Paris, there appears to have been an extraornary diminution in the numbers of the infected. As compared with the months immediately before and after, the contrast was striking. In April the return was 1 in 87, while in March it was 1 in 35, and in May 1 in 36: so that the terror of the epidemic may be presumed to have operated very remarkably as an extinguisher of debauchery.

Another circumstance worth observing is the large proportion of prostitutes who escape syphilis altogether. The fact is one which has long been suspected; but every day's experience seems to confirm its truth. Some women are rarely, if ever, diseased; while others are so in rapidly successive attacks, seldom quitting the hospital but to return in the course of a week. The dispensary physicians think that about half the *filles publiques* resist the infection; but Parent-Duchatelet, with reason, doubts the accuracy of this conclusion: he considers it as rather exaggerated.

Other remarkable observations respecting syphilis, its frequency, and its ultimate tendency, we must wholly omit in these our circumscribed limits—taking occasion once more to recommend the perusal of the work itself to those interested more particularly in such inquiries. We could have wished, also, to have made a few more extracts from Duchatelet; but we find it impossible to gratify ourselves in this respect, without neglecting other topics of more immediate concern.

METROPOLITAN UNIVERSITY.

We announced in our number for Nov. 5 that the King had appended the sign manual to the Charter of this establishment; and we published the draught of the Charter itself, in September last.

The newspapers this week give the document in its completed form; differing from what has already appeared in this journal, only in two sentences, and in the addition of the names.

We give the sentences to which we allude:—

"And for the purpose of granting the degrees of Bachelor of Medicine, and Doctor of Medicine, and for the improvement of medical education in all its branches, as well in medicine as in surgery, midwifery, and pharmacy, We do further hereby will and ordain that the said Chancellor, Vice-Chancellor, and Fellows, shall from time to time report to one of our principal Secretaries of State, what appear to them to be the medical institutions and schools, whether corporate or unincorporated, in this our metropolis, or in other parts of our United Kingdom, from which either singly or jointly with other medical institutions and schools in the country or in foreign parts, it may be fit and expedient in the judgment of the said Chancellor, Vice-Chancellor, and Fellows, to admit candidates for medical degrees, and on approval of such report by our said Secretary of State, shall admit all persons as candidates for the respective degrees of Bachelor of Medicine and Doctor of Medicine," &c.

"That the said Chancellor, Vice-Chancellor, and Fellows, shall have power, after examination, to confer the several degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Doctor of Laws, Bachelor of Medicine, Doctor of Medicine, and to examine for medical degrees in the four branches of medicine, surgery, midwifery, and pharmacy, and that such reasonable fees shall be charged for the degrees so conferred as the said Chancellor, Vice-Chancellor, and Fellows, with the approbation of the Commissioners of our Treasury, shall from time to time direct."

The following list of the names of the *corps d'élite* we give exactly as it has been published. There are peculiarities about it worth preserving in their original state: it is a curious specimen altogether, in more respects than one, of the "talent of this enlightened age:" but we shall have more to say about it in our next.

Our right trusty and well beloved cousin, William Cavendish, Earl of Burlington (Chancellor.)

The Right Rev. Father in God Edward Lord Bishop of Durham,

The Right Rev. Father in God William Lord Bishop of Chichester.

Our right trusty and well beloved Councillor Henry Baron Brougham and Vaux, and

Our trusty and well beloved George Biddel Airy, Esq. our Astronomer Royal, and Fellow of the Royal Society.

Andrew Amos, Esq. Barrister-at-Law.

Thomas Arnold, Doctor in Divinity,

John Austin, Esq. Barrister-at-Law,

Neil Arnott, Esq. Doctor in Medicine.

John Bacot, Esq.

Francis Beaufort, Esq. Captain in our Royal Navy, Hydrographer of the Admiralty, and Fellow of the Royal Society.

Archibald Billing, Esq. Doctor in Medicine, and Fellow of the Royal College of Physicians.

William Thomas Brande, Esq. Vice-President of the Royal Society.

James Clarke, Esq. Doctor in Medicine, Fellow of the College of Physicians, and of the Royal Society.

Philip Cecil Crampton, Esq. Doctor of Civil Law, Fellow of the Royal Society, and our Surgeon-General in Ireland.

John Dalton, Esq. Doctor of Civil Law, and Fellow of the Royal Society.

William Empson, Esq. Barrister-at-Law, Professor of General Polity and the Laws of England at the East India College.

Michael Faraday, Esq. Doctor of Civil Law, Fellow of the Royal Society.

Sir Stephen Love Hammick, Bart. Doctor in Medicine, Fellow of the Royal College of Physicians, and Fellow of the Royal Society.

John Stephens Henslow, Clerk, Master of Arts, Professor of Botany in the University of Cambridge.

Cornelius Hewett, Esq. Doctor in Medicine, and Downing Professor of Medicine in the University of Cambridge.

Thomas Hodgkin, Esq. Doctor in Medicine.

Francis Kiernan, Esq.

John George Shaw Lefevre, Esq. Fellow of the Royal Society.

John William Lubbock, Vice-President and Treasurer of the Royal Society, (first Vice-Chancellor.)

Sir James M'Grigor, Baronet, Doctor in Medicine, Doctor of Civil Law, Fellow of the Royal Society, Fellow of the College of Physicians, one of our Physicians Extraordinary, and Director-General of the Army Medical Board.

Richard Rainy Pennington, Esq.

Jones Quain, Esq. Doctor in Medicine.

John Rideout, Esq.

Peter Mark Roget, Esq. Doctor in Medicine, Secretary of the Royal Society.

Nassau William Senior, Esq. one of the Masters of our High Court of Chancery, and Fellow of the Royal Society.

Joseph Henry Gerrard, Doctor of Laws, Principal of the Bristol College.

Richard Sheepshanks, Clerk, Fellow of the Royal Society.

John Sims, Esq. Doctor in Medicine.

Connop Thirlwall, Clerk, Fellow of Trinity College, Cambridge.

James Walker, Esq. Fellow of the Royal Society, and

Henry Warburton, Esq. member of the Commons House of Parliament, and Fellow of the Royal Society.

NEW BRANCH OF THE PROVINCIAL ASSOCIATION.

We have much pleasure in devoting a portion of our space this week to an account of the meeting at Southampton. The object of establishing a Southern *branch* of the great Provincial Medical Association is wholly praiseworthy. When it was attempted some time ago to institute an Eastern Association, we expressed our dissent, because we saw that it was likely to weaken *the* Association, by converting it into a sort of merely *Western* union: we considered it as a needless, if not a mischievous division of power — a squandering of resources which might be better applied. The projected Eastern establishment has since, we believe, become what it should have been from the first—a branch of the original trunk. To both the Southern and the Eastern branches, in this relation to the parent institution, we heartily wish every success. The grand central Association has had our best wishes from the very commencement.

MATERIA MEDICA LECTURES.

Mr. Pereira has kindly consented to let us have a new series of his valuable lectures on Materia Medica, supplementary to those already published in our last two volumes, and which are required to render the course complete. We make this announcement in consequence of applications from many cor-

respondents who were desirous of knowing what we intended to do on the subject. Next week a lecture on *Nux Vomica* will be given, with illustrative engravings.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Mr. Earle, President, in the Chair.

Dec. 13, 1836.

A Case of Lithotomy was read, by Mr. W. Hill, of Wotton-under-Edge; the paper was communicated by Mr. Stanley.

The patient was a boy six years of age, who had all the usual symptoms (rather severely manifested) of stone in the bladder. Mr. Hill performed the lateral operation with the gorget, and removed the stone, which proved to be of the mulberry kind, with a very rough surface.

Considerable bleeding took place from the wound soon after the operation, but it yielded to cold applications; and though it returned on the following night it stopped again. The wound healed in about a fortnight, but the boy was troubled for some time afterwards with various pains and complaints. He felt pain in the glans penis, while making water; the elbow-joint became inflamed; and subsequently the scrotum of one of the testicles. For several months the pain in making water continued, and sometimes was very severe, and attended with calcareous and mucous deposits in the urine. The boy however at length recovered.

The author of the communication seemed inclined to suppose that when irritation produced by the stone in the bladder was withdrawn, the nervous functions became deranged, and gave rise to all the above-described symptoms.

Infrequency of Calculus among Seamen.

A note was afterwards read, from Mr. Copland Hutchison, in continuation and confirmation of some former observations advanced by him in the 9th and 16th volumes of the Society's Transactions. They went to show the great infrequency of calculous disorders in seafaring people of all ages; and the author quoted a curious passage from Aretæus in support of his opinion.

Mr. Hutchison likewise observes, that he has found, contrary to what has been advanced on this subject, that the inhabitants of Scotland are as subject to calculous disorders as their southern neighbours.

We are enabled to give the following more ample account of Mr. Hutchison's note,—the chief points to be established by which were—first, the infrequency of calculous diseases among sailors; and secondly, their prevalence among the natives of Scotland. On the present occasion he confined himself to the former; merely stating in reference to the latter, that his opinion had been confirmed by further evidence, during a recent visit to the North.

To the idea that the complaints alluded to are infrequent among sailors, it has been objected—that this comparative immunity arises not from any influence of the mode of life among sea-faring people, but from the parties not entering it until after the period at which the calculous diathesis becomes developed. This objection Mr. Hutchison met, by stating that many boys are admitted into the navy between the ages of nine and ten (2000 boys are expressly mentioned in the Parliamentary Estimates for the Navy), while the number of operations for stone on persons above fourteen is more than double that on boys of younger age. He also further fortified his position by adducing the authority of Aretæus, who distinctly enumerates a sea-faring life (— *καὶ πλοῦς καὶ ἡ ἐν θαλασσῃ βιοτη*)* as among the remedies for calculous affections.

Mr. Hutchison recently applied to Sir William Burnet, Physician-General of the Navy, by whose directions the records of the Naval Hospitals were searched; and it was thus ascertained that only one case of calculus had occurred since 1830, the date of the author's former paper.

Mr. Hutchison concluded by recommending pure air, open bowels, active exercise, swinging, warm clothing, a spare use of vegetables, and iodine given internally, and rubbed over the region of the kidneys, as the best preventive and remedial measures.

MEETING AT SOUTHAMPTON,

FOR THE

FORMATION OF A SOUTHERN BRANCH

OF THE

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Pursuant to a requisition signed by nearly one hundred physicians and sur-

* Medico. Græco. Opera. accurante Kuhn, vol. xxiv. p. 333. Lepsiæ, 1828.

geons practising medicine in the Southern Counties, a meeting was held at the Audit House, Southampton, on Tuesday, November 29th, for the purpose of organizing a district branch of the Provincial Medical and Surgical Association. Notwithstanding it was the day on which the high gale of wind occurred, the attendance was most numerous, there being above seventy medical men present from all parts of the district, many coming twenty, thirty, and even forty miles. Amongst the medical gentlemen from a distance were—Dr. Forbes, of Chichester; Dr. Crawford, Mr. Wickham, Sen., Mr. Mayo, Mr. W. J. Wickham, Mr. Smith, of Winchester; Dr. Groves, Mr. Henry Coates, Mr. Sampson, Mr. J. Winza, of Salisbury; Dr. Towsey, and Mr. Fluder, of Lymington; Mr. Burnett, and Mr. Curtis, of Alton; Dr. Engledue, Mr. Hillard, Mr. Davey, of Portsmouth; Mr. Beddome, and Mr. Sainsbury, of Romsey; Mr. J. Blatherwick, of Fareham; Mr. T. Blatherwick, and Mr. Andrews, of Titchfield; Mr. Caldwell, and Mr. Warwick, of Millbrook; Mr. Bury, of Farnham; Mr. Eager, of Guildford; Mr. J. P. Gruggen, and Mr. Elliot, of Chichester; Mr. E. O. Spooner, of Blandford; Mr. Smart, of Cranbourne; Mr. Smith, of Bishop's Waltham; Dr. Twynham, and Mr. Peskett, of Petersfield; Mr. Lee, of Hythe; Mr. J. Welch, of Christchurch; Mr. Goodwin, of Totton: and of those residing in Southampton, there were—Dr. M'Roberts, Dr. Steed, Dr. Down, Dr. Oke, Dr. Hennen, Dr. Wheeler, Mr. Maul, Mr. Reele, Mr. Judd, Mr. Stace, Mr. Corfe, Mr. Colebrook, Mr. Fowler, Mr. Simpson, Mr. Bullar, Mr. Clarke, Mr. Ware.

On the motion of Dr. M'Roberts, of Southampton, seconded by J. R. Beddome, Esq. of Romsey, Dr. Forbes, of Chichester, was called to the chair.

Dr. Forbes returned thanks for the honour done him in placing him in the chair, and whilst he disclaimed his peculiar fitness for the office, yet, wishing well to the society, he was anxious to do anything which others might deem calculated to promote its interests. He felt proud to see so numerous and respectable an assembly met on such an inclement day, and many of them at so great a distance from their homes. It was a proof that those present were anxious to emulate their brethren in other parts of England, who had originated and kept up the Provincial Medical and Surgical Association; and a good augury that the medical practitioners of the South were both able and willing to assert the honour and dignity, and to protect the interests of the profession. He had been a member of the Provincial Association from its origin; and having attended nearly all its meetings, he was deeply convinced of its importance, and was therefore resolved that anything tending to extend its influence should obtain his zealous support. We were met, he said, to-day, to bring this Association home to our own doors, by establishing a branch of it, of which all of us might become members, and at the meetings of which we might all, without journeying far from our own fire-sides, share at least in part in the pleasures and advantages which all who attended the meetings of the parent society must have experienced. He concluded by saying, that as Mr. Wickham, who had the honour of suggesting the establishment of the branch, and who, together with Mr. Bullar, had taken upon himself all the labour of realizing it, was prepared to state the objects for which we were met, and the means which were deemed most proper for accomplishing them, he would not detain the meeting longer, but would take the liberty of requesting Mr. Wickham to bring forward the propositions he was prepared to make.

W. J. Wickham, Esq., (of Winchester) delivered the following address.

Gentlemen,—The requisition which has assembled us here to day will have sufficiently explained to you the objects of this meeting, viz. the extension of the Provincial Medical and Surgical Association through the southern counties—not, indeed, to increase its *numerical* strength alone, for that is already great—but to form a branch of the parent trunk, which shall impart strength and vigour to its operations, and render that Society, at least in these parts, more effective, and more useful.

In the name of those with whom I have been associated in the attempt to procure this meeting, and for myself, I beg to thank you for the readiness with which you have responded to our call. It is, I trust, no unworthy cause in which we would engage you: and I hope it may not suffer from the poor ability of the individual who is now called upon to address you.

Association, gentlemen, is the great feature of this Institution, a power which, whether exerted for evil or for good, multiplies and combines individual strength and talent, in a ratio proportionate to its extent. It is a power now resorted to in our *political conflicts*, and is found to be mighty. It is exerted to diffuse and extend the blessings of religion, and is found to prosper. It is adopted on an extensive scale to promote the cultivation of *general* science, and is found to give an impetus of no ordinary strength to the progress of its pursuits.

I feel satisfied that I have good reason

to congratulate you, and the *medical profession* at large, on the employment of this great power in the service of our department of science.

Societies have existed for many years in our profession—they have been formed in the metropolis and in the provinces—but they have been mostly wanting in that vital property, association; their interests, too, have been local, and therefore their energies have been cramped. It has been reserved, however, for the Society under whose influence we are met here, to incorporate ourselves—to wield this great power with a gigantic strength. It has brought Northumberland into close alliance with Cornwall; it has identified the interests of the eastern with the western counties; it has brought men into *communion* who by their acquirements and labours *only* have been known to each other; it has created friendships in some; it has renewed them in others; it has cemented them in all. It has roused the slumbering energies of many; it has *encouraged* ardent cultivators of our science; it has moreover given a tone to the character of provincial men, which their high and honourable calling demands.

It has been my good fortune only to meet the Association once, at Oxford, last year; I there became acquainted with men of whom I had heard all my life—great men, whose attainments I had long respected, but whose generous and benevolent minds, until then, I knew nothing of. It was there I saw the interchange of opinions between men of high and those of humbler stations, each willing to impart—each eager to receive. It was there I saw a Kidd, a Pritchard, a Hastings, a Carrick, a Johnson, a Forbes, and others with intellects of like capacity, receive the homage of above three hundred of their brethren.

I saw two of our distinguished members receive the honorary degree of the University of Oxford; I saw all participate in the most marked attention and respect which the highest characters in Oxford could offer.

Surely, Gentlemen, it is a matter of congratulation to us *all*, that the provincial members of our profession have thus associated to advance the science of medicine, and to assure for it the position amongst its kindred sciences to which it is justly entitled.

It was at Oxford too that inquiries were set on foot upon the subject of medical attendance on the poor, the result of which is now before the public, in the shape of a report from the Provincial Association.

To that report, which has just appeared, I beg your earnest attention; it is drawn up at considerable labour, and is grounded on the most authentic information. Its recommendations have been enforced with considerable temper; and the subject treated with the utmost impartiality, "great care having been taken to separate the *bare facts* of each case submitted to the committee, from *expressions* of indignation, which a keen sense of oppression and injury had wrung from the correspondents."

The report has forcibly shewn that by the existing system the burthen of maintaining the poor during sickness is imposed on the medical profession, and imposed too in the most arbitrary and oppressive manner,—not indeed for the benefit of the poor, but for the imaginary benefit of the "rate payers."

It further shews that the profession is by the new authorities submitted to insult and degradation; and that the Commissioners have put forth charges which are entirely unfounded, in order, "by impugning the character of the medical body, to reconcile the public to the unjust treatment which they have put upon it, and in many instances successfully."

The report sets forth the errors of the system of "tenders and competition; which, independently of the professional degradation associated with it, exhibits a narrow-sighted policy on the part of the Commissioners, producing great injustice and cruelty to the poor, by exposing them to the calamities which *must* result from incompetency and neglect from their medical attendants."

The report recommends that redress be sought, by petition to the legislature, and application to the Colleges of Physicians and Surgeons and the Society of Apothecaries. "Should the Association and the medical body fail in obtaining redress from the legislature, after well-considered and well-directed efforts, the alternative is open to us—either to take a lower station in society, or *firmly to decline any participation in the medical appointments of the new poor-law.*

The report expresses a regret that there is a want of some "presiding influence over the members of our profession," to check the wretched spirit of rivalry and speculation, the under-bidding and jobbing, which too frequently is to be found.

In *this Association* can hope alone rest: this institution seems well suited to raise the moral and professional feeling among medical men in the provinces; and by means of it, more exalted principles, superior aims, and a firmer unity of purpose, will be engendered in the great body of practitioners throughout the country.

It was there also that a benevolent fund

was instituted, for the aid of our poorer brethren: surely it is a matter for our rejoicing that our interests are thus watched, protected, and supported.

It is to a society which seems to me to embrace so much that is excellent, and to involve so little that is objectionable, that I wish to invite your attention: I ask you to join its ranks; and whether you may be disposed to do so in immediate connexion with the Association itself, or whether through this proposed branch, still your services will be acceptable, and your support of value.

The first point which we have to consider, is, how *we* can best contribute our aid to the Provincial Medical and Surgical Association? In order to carry its objects fully into effect, and to extend its usefulness, I submit that *associating* and forming ourselves into a *Southern District Branch Society*, is the most effectual mode we can adopt to answer these purposes.

The next point for me to show, is what title we may have to engraft ourselves on the Provincial Association, and how far we are fulfilling its objects in so doing.

In 1834, at the meeting of the Association at Birmingham, the following resolution was agreed on, on which the *present extension to district* branches is founded:—

"The Council would recommend, where many members of the Association reside, that occasional meetings of such members take place, for the promotion of the general objects of the Association—namely, the free communication of professional knowledge, and the cultivation of good feeling among the members; the rules for such sectional meetings being left to the consideration of the respective parties."

Again: at the late meeting at Manchester, it was considered by the Council, and expressed in the proposals for a union of the Eastern Association with the Provincial, that district branch associations would render the operation of the society more effective; and, indeed, if the magnitude and extent of the Provincial Association be taken into consideration, it will, I think, be conceded that its strength will be much increased by the meetings of practitioners from time to time within a smaller sphere. Moreover, Dr. Hastings, the founder and present secretary to the Association, has sent me the terms on which we shall be permitted to unite with the Association, and the privileges which we may expect to derive from it. This letter shall by-and-by be read.

Thus, then, gentlemen, we have as much sanction and encouragement as we can obtain in this stage of our proceedings, for the formation of this Branch Association. It must remain for us to receive the official admission to it at the next general meeting at Cheltenham.

Propositions for the conduct and regulation of the Society will, in due order, be submitted to you.

The Association being thus constituted, and the seal placed upon it by this day's meeting, let us, gentlemen, go on to carry out its objects to their full accomplishment; let each of us feel pledged to contribute something (and who is there amongst us that has not some original information to impart?); let this association, then, be the treasury in which each may deposit his contributions to medical science. The opportunities of extensive inquiry, or very deep research, are open to but few, but the means afforded in the most limited sphere *should* be embraced. *Facts*, as they present themselves, *should* be recorded by us *all*, and *truths*, wherever they may be discovered, should be treasured up. To accumulate them, and to diffuse them as their value becomes established, is the province of this Association.

I feel a difficulty and a hesitation in requesting your attention to any particular course of inquiry; but I will state a few points to which the parent Society has especially directed its members.

In anatomy, the recent discoveries which have been made have laid open a field of investigation in which there appear before us treasures of inestimable value. In displaying the course of the nerves with the minuteness and fidelity which are the characteristics of Sir Charles Bell's labours, he has greatly extended our knowledge of their functions and their pathology; but still he has taught us that objects of great interest yet remain to be attained, and which it should be *our desire* to search after. Anatomy, too, has of late years unfolded to us the intimate structures of the elementary tissues, which has furnished the pathologist with *abundant* materials, from which *much* has already been gained, but of the fruits of which there *yet* remains much to be gathered. Medical topography and statistical inquiries have received great encouragement from the Association. The labour necessary to collect accurate and useful information on this subject is very great, and the materials do not at first sight appear to afford much of interest. To the reader they are heavy and discouraging; but they *remain* as records which will hereafter prove valuable to the patient inquirer after truth; and as works of reference, will give an accuracy of information which will silence the speculative theorist, and furnish means from which alone just conclusions can be drawn.

Impressed with the importance of the subject, the Council of the General Association has recommended to its members the investigation of *epidemic* diseases.

The record of cases in medicine and surgery, from private sources and from public hospitals and dispensaries, are perhaps the principal means we have of contributing to the advancement of science; and if each case be faithfully narrated, having so much of matter only in the tale as is applicable to a practical deduction, this source of information is highly instructive.

It has appeared to me that too much encouragement has been given to the *simple* narration of cases as they occur in public institutions; our periodicals have teemed with cases merely transcribed from the hospital note-books, without being selected for the value, and without being convertible, in the form in which they have been published, to any practical purpose.

This mode cannot, in my opinion, be too much reprehended: it encumbers the literature of medicine and surgery, and takes the space which should be allotted to more useful matter.

Much benefit might accrue from the communication of the nature and results of severe injuries from accident which have occurred and may occur in practice.

No emergencies in surgery are more perplexing than fractured bones, with their various complications. There are no cases to which the surgeon has to bring a matured judgment and a prompt decision into more immediate exercise; and how are these qualifications to be attained?—they can alone be built on facts accumulated by well-attested results,—not, indeed, from the personal experience of *any one man*, but from the *combined* experience of the *many*.

The question of amputation is often involved in the treatment of these accidents; it is this—are we to sacrifice the limb to save life?—or is the life to be jeopardized by the attempt to save the limb? The principles which guide the decision are for the most part well founded; but I would ask, how have they been formed?—certainly not on the experience, not, I say, on the experience of *any one man*,—not on the result of *any one case*. The experience of any *one* man is too limited to establish a principle on a point so momentous.

You will perceive readily, then, how the communication of cases of this description which may have occurred in your individual practice, would tend to *establish* present principles or to *overthrow* them.

I would ask you not for cases which shall astound and astonish by their extraordinary character,—these are seldom practically important,—but I would ask you for cases on which you have yourselves formed particular opinions, and from which we may *all* participate in the result of your reflections.

As your facts abound,—as your deductions are closely and philosophically formed,—so will your records be in proportion valuable, and your service to science great.

A series of resolutions were then passed in accordance with the principles advocated in the opening speech and address. We regret we have not room to give them insertion, but presume they will be advertised and extensively circulated.

Dr. Oke, Dr. Hennen, and other gentlemen, delivered their opinions at considerable length in supporting certain of the resolutions.

Dr. Forbes was elected President, and Messrs. Wickham and Bullar have been appointed Secretaries.

In the evening about fifty gentlemen dined together at the Star Inn, confirming by a banquet, libation, and all the honours, the very satisfactory proceedings of the day.

A STUDENT'S REMARKS ON MR. WAKLEY—THE SOCIETY OF APOTHECARIES, &c. &c.

To the Editor of the Medical Gazette.

Sir,

Although there is no unseemly boasting in your excellent periodical, nor unmeaning professions for the welfare of medical students—as in the Lancet, yet I have always observed, where there is any thing to be effected for them, you take that path which time proves to be the best. Now I have been waiting in anxious expectation to see the working of the Crown and Anchor meeting of last season, and the threatened destruction of the "Blackfriars druggists" put in execution; but as nothing comes of it, I hope you will allow me, through the medium of your journal, to summon your recreant opponent to do battle with the "Hags of Rhubarb Hall," as he calls them, or ingenuously confess that he has not power to keep his promise. When I *heard* him boast that he thanked the examiners who rejected Mr. S——, as giving him additional power over them, I doubted not but that the days of the Apothecaries were numbered. But as we get older we get wiser, at least I have in

this instance, for I now find out that Wakley's power lies more in the coffee-house than with the influential members of a certain other "House," or with those of the medical profession; for to my surprise, when, about two months back, I went on the same day into two medical libraries in London (neither of them Guy's), and asked the librarians to favour me with the Lancet, they both answered, in nearly the same words—Here is the Medical Gazette, sir; but if you want the Lancet, you must go to the coffee-shop, for we do not take it here. Knowing that I was an intruder in the library where I first went, I concluded that this circumstance led to my getting this answer; but I was soon convinced of the contrary by the man coming up to me, and saying—"Any book in the collection you like to see, sir, I shall be happy to get out for you; but we do not take the Lancet on account of its scurrilous and useless politics, which distract the students' minds from study, and set them imagining a state of things which will never exist." I now see the truth of this last statement; for had the students, instead of rebelling with such a leader as Wakley at their head, manfully signed a paper in disapprobation of Mr. S.'s rejection, they could not have got less by it than they did by the "Crown and Anchor" meeting: and they would have had the consolation of having acted openly and boldly, while the Worshipful Company would have seen that they might not abuse the students with impunity.

I must say it was a positive injustice on the part of the Hall the rejection of Mr. S., whom I had the pleasure of seeing examined twice, with from thirty to forty other students, who all went up to the Hall, some before and some after Mr. S, without one being rejected; and yet, from the number of questions which he answered with elegance and accuracy, and from the manner in which the other students looked up to him, I at once saw he was the most talented pupil present.

In the Lancet for the 29th of October, we see such a silly criticism on the regulations of the Hall respecting apprenticeships, that, did I not believe the gentlemen at the Hall infinitely above transacting any business with Wakley, I certainly should think they had paid him to contradict all his former statements, and that the abusive and useless paragraph which preludes the paper was a blind; for so thoroughly is it at variance with all he has previously given to the world in the Lancet, on the subject of the Hall, that it reminds me of "Satan divided against himself," and convinces me that Wakley has no settled principle of action.

In former numbers of the Lancet may be read (if any one likes so to waste their time), accounts of oppressive regulations, which pick the pockets of students, by their long stay in London, and by lectures; the necessity of laws to authorize medical men to prepare their own sons and apprentices for examination during their apprenticeship, &c.; and when the Apothecaries make a lenient and very proper regulation, enabling students to appear for examination at the expiration of their apprenticeships, he finds fault with that also. And yet, I have no doubt, if the Hall is done away with (which I trust it will be if they do not reform), and the University substituted to give licenses in pharmacy, we shall see him, like Oliver Proudfoot (in Scott's Chronicles of the Canongate), boasting of victories he has never won, and of which he has only retarded the achievement, by appearing in the field.

I must now call the attention of your readers to the abuses existing at Apothecaries' Hall, which I am sure you will insert in your valuable journal; for although I know from experience that you are infinitely above giving students improper advice, which is likely to make them rebel against the powers that our government, in its wisdom, has set over them, yet I am well persuaded that if these powers become abused by the persons to whom they have descended, to the injury of students, their friends, and the country at large, you will not allow it to go on without endeavouring to prevent the mischief likely to ensue.

1st, The lower classes of this country will, in time, become considerably injured by the expenses attendant on a medical education, if allowed to exist as at present, by lessening the number of medical men, and by keeping out those who, from their previous position in society, would be content to attend the poor properly, and be satisfied with such remuneration as they could afford. We all know that most medical men, after four or five years' practice, are no longer solicitous as to who attends the poor in their vicinity (though, to the credit of the profession be it spoken, few cases of neglect can be adduced), and thus, as is natural, the poor fall into the hands of ignorant quacks, who are always endeavouring to ingratiate themselves with them; or into the out-patient department of hospitals, where they fall into the hands of scientific and humane physicians and surgeons; therefore they could not do better, were it not for the necessary exposure to the vicissitudes of the atmosphere, and the disquiet the patient is often put to in being obliged to come from a distance. Yet

at the present time any person, however humble, may procure the attendance of a well-educated medical man at his own residence; but if this three-winter and two-summer regulation of the Hall last long, it will be different this time six years, for it has frightened no less than three youths of my limited acquaintance out of the profession, who were well educated, and likely to become honourable and useful members of the profession; but the waste of so much time was more than they or their friends would submit to. Now it is this three years' course of education I find fault with, as being so great an evil, and not to the expense of lectures; for I consider the lecturers are not sufficiently well paid, where they have small classes, considering the extent of information required of a lecturer.

When I passed the Hall, which was about nine years back, we were only required to attend for six months; but then we studied all the while with diligence, knowing that our time was only just sufficient to become well acquainted with our profession. But now, by what I saw of the state of medical education when last in London, about two months back, young men seem to know that they are compelled to study so much longer than a man of ordinary abilities requires, to learn to be an apothecary, that they procrastinate studying until within a short time of examination, when they go and *grind*. And from conversations I had with several who have lately passed, I am convinced they are not nearly so well informed in medicine and pharmacy as most of the six months' men who studied in 1826 were. Now, as a remedy for this first abuse, I would suggest that the fees for lectures be very considerably increased, so that lecturers may receive from each student in a much shorter time that remuneration which, from their scientific attainments acquired for the use of the students, they have a right to expect. This would give the public interested in medical education a much better opinion of lecturers than they have now; for the general opinion now is—whether true or not, I know not, that the Hall requires this long course of study, that the lecturers may have time to fill their pockets at the expense of the students; the Apothecaries' Society knowing well that they must blend the interest of the medical schools with their own, to keep their power much longer.

2dly. Students complain that they are not treated by the beadle as gentlemen, when they go to register, &c. This is a great evil; and I am told by students, that the manner the Company behave towards them now, if at any time they make inquiry at the Hall during their studies, is such as to put them forcibly in mind of an unopposed country shop-keeper, who, knowing the articles he sells cannot be procured elsewhere, is not over civil to his customers. A little wholesome opposition on the part of the New University will reform this abuse.

3dly. Rejections at the Hall are much more numerous than at any other place of examining students in this country. This is easily accounted for, when we consider that the names of the Examiners are not known to the world by any scientific works, and by their not being among the heads of the profession; hence public confidence would be soon wanting, were it not for frequent rejections; but as it is, the public think having the license implies knowledge, although signed by men quite unknown to science.

4thly. The Latin arrangements at the Hall are very bad; students are allowed to go up and be examined in Celsus and Gregory, before they go up for general examination. This is very much done now, and generally with success: having got through this, they think, and very justly, that they cannot be in danger of rejection in prescriptions, and certainly no one can, if he is able to translate Celsus or Gregory properly; but it is the fact, that many who have successfully got through Celsus and Gregory, have been sent back for six months in prescriptions; therefore the better way for students to prevent such a wanton injury, would be to undergo the examination in Celsus and Gregory when they go up for general examination, when, if rejected in classical Latin, they cannot keep a student back six months; and they would not be silly enough to reject him in the easy Latin of an ordinary prescription, after having immediately before passed him in Celsus.

Such are a few of the abuses which have reached me. I hope these, and others which exist, will be reformed by the Worshipful Company, especially those which keep young men in London so long, wasting their time, in most cases, in vice and idleness. Should they reform, there is no one wishes the Worshipful Company less evil than myself; but should they continue their oppressive regulations, I shall rejoice most heartily if the University puts an end to their pretensions.

I dare say you will think I am endeavouring to make you a *radical:* nothing is farther from my wish, for I admire your politics, and my opinions always coincide with those of the GAZETTE. But there are two things which annoy me in the profession. First, Wak-

ley's scurrility and wrong views of things, which sometimes mislead me; and 2dly, the oppressive regulations of the Apothecaries,—a general complaint, which, it so happens, affects relations of mine considerably,—who very justly say, if we are to be apothecaries, why give us a physician's education? and after our labours and expenses are finished, are we to be satisfied with an apothecary's license? These are the causes of this budget; and as I have not much time for writing, I wanted, as the vulgar say, to "kill two birds with one stone," (Wakley and the Apothecaries.)

Hoping that my friends will not forget to put this in your letter-box, and that you will insert this in the GAZETTE of Saturday next, I subscribe myself

YOUR CONSTANT READER.

Liverpool, December 6, 1836.

I have not put my name to this paper, because it might injure several relations; and I am sure what Wakley says about anonymous letters in his last Lancet, will have no more weight with you, than his endeavour to injure you will have with the profession. He proves by paragraphs from the GAZETTE, that when his "Act" was first made you spoke favourably of it, but when it was brought into use, and found not to answer, you were obliged to discountenance it, as any other theory which sounds well when read, but which is totally useless in practice.

[We have given insertion to the above (slightly condensed) because it appears to be written by a student who makes some sensible remarks with amusing quaintness, At the same time we beg not to be supposed to concur in all the sentiments expressed by our correspondent.—ED. GAZ.]

EXPERIMENTS ON THE VOICE.

HAVING laid bare the vocal organs of an adult male, I raised the larynx to the position it would occupy by the elevation of the voice an octave, being about half an inch, and at the same time minutely observed the position of the lowest ring of the trachea in reference to the sternum. By this operation I found the trachea was raised out of the chest, nearly to the same extent as the larynx had been elevated towards the base of the skull. My next step was to examine whether any change had taken place in the diameter of the tube. Having for this purpose examined the diameter of the trachea in its natural position, I again elevated the larynx to the same extent as before, and found the diameter diminished one third. These experiments prove that, contrary to the general preconception, the elevation of the larynx shortens the tube independently of the contraction between the thyroid cartilage and *os hyoides*, and at the same time lessens its diameter. The same effects may easily be detected during life by placing the finger on the trachea immediately above the sternum during the elevation of the larynx, when the trachea is found to ascend out of the chest, and afterwards to return to its former position, a movement in which the lungs and bronchia participate. The alteration of the tube in diameter may also be perceived by grasping the trachea with the finger and thumb during the elevation and depression of the larynx.

Such are the principal means provided for adjusting the vibrations of the vocal tube to those of the glottis; but as the variation of length is not sufficient to render the tube capable of adjusting itself to the whole range of tones, the relative tension of its surface supplies the deficiency. The influence of the tension of elastic membranes in modulating the tones produced by them has been very satisfactorily demonstrated by the interesting experiments of Savart, and it is no doubt materially concerned in the analogous phenomena of the voice. The diameter of a tube does not influence the pitch of its sound, but there is an obvious appropriateness in the diminution of the diameter of the trachea as the sound becomes sharper; for experience has taught the makers of wind instruments that the best qualities of tone for the lower notes are obtained when the bore of the instrument is large, and for the higher notes when it is small. The influence of the vocal tube as far as relates to its effects on the key of the voice, is terminated at the *velum palati* by the several perforations of the nostrils, the Eustachian tubes and the mouth. The opinion of Savart, that the mouth modifies the key of the tone, is consequently erroneous. We find analogous acoustic effects in musical instruments; for instance, the lowest joint of the flute, which is six inches in length, having three perforations, when its keys are open lowers the tone of the instrument only half a note. The important distinction between the effects of air passing through the tubes of musical instruments, according as their sides are rigid or membranous, is, that in the former case, as exemplified in flutes, hautboys, &c., the air vibrates independently of the sides of the tube, whilst in the latter, the tube enters into compound vibrations with the column of air.—*Mr. Bishop on the Voice.*

WORKING OF "WAKLEY'S ACT."

To the Editor of the Medical Gazette.

SIR,

ALLOW me to thank you for your able and complete exposure of the inefficiency of the Honourable (!) Finsburian's measure. I feel it is due to you to acknowledge that in a few days after the insertion of my note and your powerful remarks, the overseer of the parish of —— called, without any solicitation from me, and discharged the amount of the coroner's order.

The affair speaks for itself, and requires no comment from—Your obedient servant,

CHIRURGUS.

Dec. 14, 1836.

NOTE FROM MR. WALKER.

To the Editor of the Medical Gazette.

SIR,

I SHALL be much obliged by your noticing the following *errata*, which appeared in my paper of Saturday last, December 10th.

In the paragraph commencing "Undoubtedly the arrangement of the nerves of the eye, &c.," *for* "distinction," *read* "distribution of the nervous filaments." In the last paragraph, *for* "carried out and perfected by himself," *read* "myself, &c."

As these errors materially affect the whole, I think it important that they should be pointed out.—I am, sir,

Your obedient servant,

JOHN WALKER.

Manchester, Dec. 12, 1836.

NEW MEDICAL BOOKS.

Practical Observations on various subjects relating to Midwifery. By Dr. James Hamilton. Part II. 8vo. 7s. 6d.

Elements of the Practice of Physic. By D. Craigie, M.D. Vol. 1, 8vo. 18s.

Outlines of a Course of Lectures on Medical Jurisprudence. By T. S. Traill, M.D. 2s. 6d.

Elements of Medicine. By R. Williams, M.D. Vol. 1, 8vo. 10s. 6d.

Quain's Anatomical Plates of the Muscles. Coloured edition, royal folio, 5l. 5s.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

December 15, 1836.

William Henry Swallow, Halifax, Yorkshire.
John Macartney, Nolan.
Mervin George Walker Coates, Salisbury.
Joseph Welsby, Prescot, Lancashire.
Charles Stevens, Oxford.
Charles Maynard Frost.
Thomas Pooley Smyth, Ramsey, Huntingdonshire.
William Henry Cullen.
John Bond, Warwickshire.
John Thompson, Middleham.
John Roberts.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 13, 1836.

Abscess	22	Inflammation	232
Age and Debility	233	Bowels & Stomach	20
Apoplexy	65	Brain	21
Asthma	86	Lungs and Pleura	25
Cancer	17	Influenza	1
Childbirth	21	Insanity	55
Consumption	333	Jaundice	4
Constipation of the Bowels	6	Liver, diseased	36
Convulsions	214	Locked Jaw	1
Croup	53	Measles	84
Dentition or Teething	75	Miscarriage	8
Diarrhœa	4	Mortification	21
Dropsy	102	Paralysis	32
Dropsy on the Brain	41	Rheumatism	5
Dropsy on the Chest	14	Scrofula	3
Dysentery	1	Small-pox	69
Epilepsy	3	Sore Throat and Quinsey	4
Erysipelas	13	Spasms	15
Fever	61	Stone & Gravel	3
Fever, Scarlet	42	Stricture	1
Fever, Typhus	7	Thrush	48
Gout	30	Tumor	5
Hæmorrhage	2	Unknown Causes	591
Heart, diseased	28		
Hooping Cough	70	Casualties	43
Indigestion	1		

Increase of Burials, as compared with the preceding week . . } 1641

*** This being the 52d Weekly Bill, and the last which will be included in the General Bill of the present year, several of the Parish Clerks who had neglected to make their returns in due order, have now reported their deficiencies; from which cause appears the great increase in the Burials.

METEOROLOGICAL JOURNAL.

Dec. 1836.	THERMOMETER.	BAROMETER.
Thursday. 8	from 38 to 45	29·23 to 29·10
Friday . . 9	32 41	29·06 28 92
Saturday . 10	28 42	29·11 29·35
Sunday . . 11	27 41	29·45 29·55
Monday. . 12	22 50	29·55 29·31
Tuesday. . 13	45 48	29·22 Stat.
Wednesday 14	32 44	29·23 29·49

Wind S.W. Except the 9th and two following days, generally cloudy, with frequent rain. A heavy shower of hail on the evening of the 8th. Rain fallen, ·85 of an inch.

CHARLES HENRY ADAMS.

ERRATA.

IN the report of the London Committee of the British Association, on the Motions and Sounds of the Heart, p. 365, col. 1, *for* "Exp. 58," *read* "Exp. 7, 9, 10, 12, 14." Again, lower down, same col., *for* "Exp. 6, 7, 9," *read* "Exp. 7, 12, 14." And again, still lower down, *for* "Exp. 7, 8," *read* "Exp. 7, 12, 14."

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 24, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XIII.

Medico-legal consideration of Pregnancy—Cases in which the ascertainment of pregnancy is required by law—The old writ "De ventre inspiciendo"—Jury of matrons—Signs of Pregnancy—Of conception—Popular signs of pregnancy from suppressed menses, constitutional peculiarities, and enlargement of the person—Important diagnosis from the state of the areola—Discoloration of the vagina—Movement of the fœtus—Quickening—State of the cervix uteri—Ballottement—The auscultatory signs—Conclusions respecting the signs derivable from auscultation.

The subject which next presents itself to us, in the simple and natural order adopted in these lectures, is pregnancy; and I have only to premise, that in treating it, I am not to be expected to take in that wide range which more properly belongs to the teachers of physiology and midwifery. A view of the subject on so extensive a scale, would embrace a complete history of the changes which occur in the female system from the moment of conception to that of parturition, with an account of the various theories which have been suggested relative to the causes of those changes. But our purpose will be fully answered, if, in our medico-legal capacity, we be enabled to satisfy the demands occasionally made on us in courts of justice, to determine whether, in particular instances, pregnancy exists,—how long,—and whether the fœtus be alive or not.

Legal distinctions relative to Pregnancy.—Questions may arise, both in civil and criminal cases, as to the existence of pregnancy. The pregnant state may be feigned, or it may be concealed; and though there are old arrangements still in force, ostensibly for procuring the necessary information on this head, through the agency of females,—"discreet matrons,"—still the inefficiency of such method has often been recognized, and the more usual practice now is to depute professional men to make the requisite inquiries. It is therefore incumbent on us to be prepared for such investigations.

Alleged pregnancy.—The cases in which the medical practitioner may be called upon for his medico-legal assistance, are commonly these:—

1. Where a plea of pregnancy is advanced by a widow, who, soon after her husband's death, in her own name and that of the infant of which she declares herself *enceinte*, lays claim to a portion of an inheritance. In order to provide against any imposition in a matter of so much importance, the old Roman law, *de ventre inspiciendo*, was long ago adopted in this country; a rude and barbarous arrangement for ascertaining the fact of pregnancy. It consisted in a personal inspection, made in presence of a number of "discreet men," by a number of "discreet women," who handled the breasts and belly of the examinant, until the whole party were satisfied whether she was really pregnant or not. The writ authorizing this sort of proceeding has been at different times issued: in the reign of Elizabeth there was the celebrated case of Lady Willoughby; and in the last century occurred the case of Sir John Chaplyn's lady, whose three sisters-in-law were to inherit, provided Lady Chaplyn's alleged pregnancy did not prove real.

Even so recently as a year ago, in the case of Mrs. Ann Fox, who pleaded pregnancy, and the probability of a son and

heir to her deceased husband, the question was argued at large in Chancery, whether the old writ should be issued, as applied for by the heir presumptive; and it would probably have been granted in that case, but that, during the tediousness of the Chancery suit, the lady's pregnancy became so far advanced as to leave little doubt of its reality; a slight surveillance, in the shape of an occasional visit from two matrons and two medical men, was all that was then deemed necessary*.

2. In criminal cases, pregnancy is sometimes pleaded in bar of execution: it forms the ground of a reprieve—*in favorem prolis*—that the innocent may not suffer with the guilty. This law also has come down to us from ancient Rome, where it was held "quod prægnantis mulieris damnatæ pæna differatur, quoad pariat." But before the plea is admitted, it must be made good by the verdict of a jury of "twelve matrons, or discreet women," impanelled from among those who may happen to be present in court: and it must be found, not only that the prisoner is pregnant, but that she bears a *quick* or living child.

Jury of Matrons. — The absurdity of committing so difficult an inquiry to such referees, must be obvious to every one: but there is reason to believe that the practice is worse than absurd — that it is mischievous, and fraught with danger. This had nearly been the case in an instance which occurred at Norwich about three years ago. A female was condemned to death: she pleaded pregnancy, for a respite of her sentence, and a jury of matrons, such as the courthouse afforded, was impanelled to try her plea. The jury and the prisoner retired for an hour; but what methods were taken for ascertaining the fact of pregnancy during that time, we know not: we only know that the verdict of the twelve *discreet* women was, that the convict was *not* pregnant. The crime for which the unfortunate woman was tried was murder; her execution, therefore, as the law then required, was to take place on the next day but one after her trial.

It fortunately happened that the attention of two or three intelligent surgeons was attracted to the case. They procured an opportunity of examining the prisoner's person, and came to a very different conclusion from that of the discreet jury of matrons: they found that she was in the sixth month of pregnancy, and that the child was alive. By much exertion, deserving of the highest praise, they were enabled to make a timely representation of the true state of the case to the judge, and the consequence was that a reprieve was granted. I may add, that, in due time, the correctness of the professional diagnosis was verified; a living infant was brought forth in less than four months.* Ought not this to put an end to the jury of matrons' system for ever? So gross, so almost fatal a blunder, ought surely to stand in perpetual judgment against such a practice. Yet the old law remains, nor is there any likelihood of its being soon repealed. The only chance, therefore, of a rational proceeding, is to be looked for from the discretion of the judges. As they have, in some civil cases, committed the examination of the person to two physicians and two surgeons, selected for the purpose, so it is to be hoped that the custom will be generally followed, and that the female jury may be only known by the next generation, as one of the absurd things which their fathers had so long and so strangely countenanced.

3. It may be necessary, in other cases beside those in which a prisoner is capitally condemned, to inquire into the fact of pregnancy. The magistrate may be induced to grant a mitigation of punishment—the severities of imprisonment or hard labour may be relaxed, should the convict prove to be pregnant.

4. And lastly, the question may be of vital importance in regard to charges of attempted abortion. If pregnancy were denied by the accused, and not shown to exist upon sufficient medico-legal evidence, it is clear that there would be no *corpus delicti*: while, on the other hand, competent professional testimony that the prisoner is positively not pregnant, must put an end to any charge of the sort preferred against her.

Concealed pregnancy.—The detection of pregnancy is in general a difficult task; but especially so when the female is gifted with powers of deceit, and has strong motives for concealing her condition. When the attention of the medical man is not immediately directed to that point, and no circumstances occur to awake his suspicion, as when his services are required for other complaints, nothing is more common than that he should find himself astonished at last by the operations of nature. Ridicule and blame have often been the meed of the practitioner for his supposed simplicity, in thus letting himself be duped, even in cases where no moral presumption could well have been entertained respecting the conduct of his patient. But whether blame justly attaches or not in such cases, I shall not stay to inquire: it is the affair of the practitioner, in the discharge of his ordinary routine duties. We, in our

* Medical Gazette, xvi. 697, and xvii. 191.

* Medical Gazette, vol. xii. p. 22, and 585.

medieo-legal eapacity, must never be without our suspicions; we are ealled in, in fact, only when suspicion already exists, and it is our business to determine whether it be well founded or not.

SIGNS OF PREGNANCY.

What are the signs on which the medical jurist may depend as indicative of pregnancy? It is plain that, for medieo-legal purposes, those vague indications on which the vulgar place reliance, and which have been unreasonably ealled the *rational* signs, can be of little or no use. At the very utmost they may warrant a presumption; but, colleeted as they must be from extraneous circumstanees, or the allegations of the females themselves, they ean only be received with the utmost caution. In legal medicine we must have visible, tangible, and audible proofs, and more or less of these in eombination, before we attain what would deserve to be considered as conelusive evidenee.

Let us first suppose the pregnaney to be uterine, and that the ehanges eonsequent on the development of the embryo proceed in their ordinary or normal eourse. Extra-uterine pregnancy, and the irregularities attendant upon that and other conditions, may afterwards be more conveniently noticed.

Question of conception. — It has been thought that soon after conception some appearances indicative of the occurrence of that state might be observed. But it would be idle to mention the fallacious and ridiculous signs which were once depended on by medical authorities, and still are by gossiping people of either sex. They were almost all grounded on certain sensations supposed to have been experienced by the female—a sudden chill, excessive languor, &c.—after increased sexual enjoyment. The question, however, is seldom or never proposed to the medical jurist, to determine the fact of recent conception in the *living* female. Where a woman has died presently after an alleged connexion—from poisoning or other injury—it may be possible to gather from the state of the organs of generation some strong presumptions, which may greatly eorroborate the circumstantial and moral evidence. A deciduous membrane may be found lining the cavity of the uterus; a mucous-looking fluid resembling semen may be found in that cavity, as well as perhaps in the fallopian tubes; and probably a corpus luteum may be detected in one or other of the ovaries.

I have here [exhibiting it] a very beautiful drawing made from nature by my accomplished colleague, Dr. Hope. It represents the state of the vagina, uterus, and its appendages, in a young female who poisoned herself. From the history of the case, and an evidently recent laceration of the hymen, it was probable that impregnation had taken place within a very short period. In the uterus, which is somewhat larger and redder than in the virgin state, was found a quantity of gelatinous matter, with that dark coagulated blood in small flakes which John Hunter describes as belonging to incipient infœtation. Both the ovaries appear turgid with very dark blood; the section of the left displays a corpus luteum, with a T-shaped scar in the corresponding surfaee, through which the ovum had probably escaped. In the right ovary may be seen an ovum apparently mature for impregnation. Both the fallopian tubes were filled with a fluid, whiter and more opaque than mucus; and in the uterus was a similar fluid, but more gelatinous and transparent. It would have been interesting had this fluid been more particularly examined as to its physical and chemieal characters. I shall have oecasion to refer to this drawing again *.

Enumeration of the signs of pregnancy.— In enumerating the ordinary symptoms of the pregnant state, we eannot wholly overlook those which are properly esteemed vulgar, although they be so little worthy of notiee for the purposes of forensie medicine. The first three among the following are of this kind—viz. suppression of the menses, morning sickness, and enlargement of the breasts and belly.

1. *Suppression of the menses.*—The fact of the non-appearance of the eatamenia at the usual period ean be of little value in a medico-legal point of view; yet, as a symptom of pregnancy, it is the one which eommonly makes the strongest impression on females themselves, and from which they usually calculate the date of their gestation. But it is obvious that suppression of the menstrual discharge may be owing to a variety of circumstances beside pregnancy. At a certain time of life it indicates a total eessation of the functions of child-bearing; and, on the other hand, women have been pregnant without ever having had the menses. Women again may menstruate more or less during the period of pregnancy. Heberden mentions a lady who had borne several children, yet had never ceased, either during her pregnancy or nursing, to menstruate regularly. Denman, on the contrary, insists strongly on the sign, and considers it as a *sine qua non* of the pregnant state.

2. *Nausea, &c.*— The concomitant circumstances of morning sickness, depraved appetite, irregular aches and pains, sharpness of the features, &c., may be classed

* See an engraving from it in next lecture.

together as a set of vague signs, which acquire any value only when strongly corroborated by collateral facts. It is true that most pregnant women do experience many of these symptoms during pregnancy; but we must recollect that they may all originate in totally different causes, and are sometimes not observable during the whole period of gestation. As to sharpness of the features, it is certainly peculiar, but is chiefly observable only in the later months, when the abdomen is very large—the integuments of the face being then affected, even drawn down by the distension and weight of the part: it is that condition which the gossips call being "all mouth and eyes."

Dr. Dewees lays great stress upon a sign which he holds to be infallible, and that is, a peculiar kind of salivation which sometimes takes place: the pregnant woman spits frequently, and in such a way as to justify the remark that she is "spitting cotton." In this country, or at least in Ireland, as we shall see by a trial to which I shall probably refer in the sequel, the term is not very different, and evidently applies to the same thing: the woman is said to be spitting "long spits." But these are matters obviously of little or no practical importance to the medical jurist.

3. *Enlargement of the breasts and abdomen.*—The breasts sometimes become unusually large, and are popularly noticed as symptoms of pregnancy. Should this enlargement be contemporaneous with other well-marked signs, it may have some value; but the breasts so frequently sympathize with the uterine system, and, indeed, are so invariably affected in their size and consistency by accumulation or suppression of the menstrual fluid, to whatever cause that circumstance may be owing, that it can clearly be only accounted as a collateral and very vague sign. Even though there be milk in the breasts, it is far from being a certain sign *per se;* for virgins are known to have had a secretion of that fluid; and old women, too, long after the cessation of child-bearing; nay, men have had an abundant flow of milk in their breasts, sufficient at least, according to some remarkable narratives given us on the authority of the celebrated Humboldt, and Captain Franklin, in his Overland Journey, to suckle their own children.

The abdomen.—With respect to enlargement of the abdomen, that most popular of the visible signs of pregnancy, we must take care not to be deceived. In the first place, are we sure when we observe this increase of size that it is owing to an enlargement of the uterus? and secondly, are we quite sure that such enlargement is owing to the presence and the development of a fœtus? These are points on which we must have some assurance before we can infer the fact of pregnancy.

The phenomenon may result from dropsy — simple, or encysted, or ovarian — from tympanitis, or other affections, with the diagnostic signs of which we ought to be sufficiently well acquainted not to confound them with the effects of pregnancy.

Enlargement of the abdomen in uterine pregnancy is generally uniform and symmetrical—an appearance which serves to distinguish it from that which is consequent on extra-uterine pregnancy, or dropsy of the ovaries. The degree of augmentation which is observed to characterise the several stages of pregnancy is worth attending to.

No very obvious enlargement of the abdomen can probably be observed until after the completion of the fourth month. About this time, say between the fourth and fifth months, the belly begins to be globular, the skin appears distended, and the fundus uteri is found to correspond to the middle point between the umbilicus and the pubes. On the completion of the sixth month the fundus has reached about the height of the umbilicus. The augmentation of volume is now very striking. About the seventh or eighth month the fundus is perceived to be higher, considerably so in many cases, than the navel. Towards the early part of the ninth month the fundus even reaches the scrobiculus cordis, though, shortly before parturition, there is a manifest sinking of the parts to about the volume they occupied in the course of the eighth month.

The state of the navel ought not to be overlooked. It undergoes changes in its figure during the regular enlargement of the abdomen; it is ultimately thrown outwards, first becoming gradually obliterated, or at least levelled with the surface of the belly; and during the latter months assuming the form of a prominent boss.

4. *Areola.*—The preceding signs are, as I have said, more or less fallacious: those, however, which I have now to notice are deserving of a higher degree of attention; and the first of these is the peculiar state of the nipple, and of the integument around it, constituting the *areola.*

The appearance of the areola as indicative of pregnancy, has long been observed by medical men, and some have been known to place great reliance upon it. Dr. William Hunter is said to have considered it as a master-sign; and a story is told of his having pronounced a woman pregnant, whose body he merely happened to see in the dissecting-room; and he persisted in his assertion, though it was objected to

him that the hymen was unruptured: his diagnosis, however, was formed from the appearance of the areola, and his opinion proved to be fully justified by the subsequent inspection of the internal parts.

But little notice seems to have been bestowed on this diagnostic sign of late years, and, in fact it had fallen into almost total discredit, when Dr. Montgomery, of Dublin, took it up, and by his excellent description of its characteristic appearance, brought it into much higher estimation than it has ever before enjoyed. I shall read for you some part of his observations on the subject; they are taken from his very able and elaborate article in the *Cyclopædia of Practical Medicine*, on the "Signs of Pregnancy." After remarking that this is one of the changes consequent on pregnancy which is of the "utmost value" in evidence of the fact, and having noticed Rœderer's account of the areola, he proceeds:—"One other we shall add, as equally constant, which is a soft and moist state of the integument, which, together with its altered colour, gives us the idea of a part in which there is going forward a greater degree of vital action than is in operation around it; and we not unfrequently find that the little glandular follicles are bedewed with a secretion sufficient to damp and colour the woman's inner dress. We must recollect, also, that these changes do not take place immediately after conception, but occur in different persons after uncertain intervals; we must therefore consider, in the first place, the period of pregnancy at which we may expect to gain any useful information from the condition of the areola."

"We cannot speak very positively as to what may be the earliest period at which this change can be observed, but we have certainly been satisfied of its existence at the *end of the second month;* at which period the change of colour is by no means the most distinct character to be observed; but the turgescence of the nipple, and the development of the little glandular follicles, are the objects which should principally engage our attention,—the colour at this period being, in general, little more than a deeper shade of rose or flesh colour, slightly tinged with a yellowish or brownish hue. During the progress of the next two months, the changes in the areola are, in general, perfected, or nearly so; and it then presents the following character:—A circle around the nipple, whose colour varies in intensity according to the peculiar complexion of the individual, being generally much darker in persons with black hair, dark eyes, and sallow skins, than in those of fair hair, light-coloured eyes, and delicate complexions. The extent of the circle varies from a diameter of an inch to an inch and a half, and increases in some as pregnancy advances, as does also the depth of colour. In the centre of this circle the nipple is observed partaking of the altered colour of the part, and appearing turgid and prominent; and the part of the areola more immediately around the base of the nipple has its surface rendered unequal by the prominence of the glandular follicles, which, varying in number from twelve to twenty, project from the sixteenth to the eighth of an inch; and, lastly, the integument covering the part is observed to be softer and more moist than that which surrounds it; and the breasts themselves are, at the same time, observed to be full and firm, at least more so than was natural to the person previously. Such," adds Dr. Montgomery, "such we believe to be the essential character of the true areola, the result of pregnancy; and that *when found possessing these distinctive marks*, it ought to be looked on as the result of that condition alone, no other cause being capable of producing it."

Placing the fullest reliance on the accuracy of this description, I should recommend to you the importance of comparing it with actual examples, as they may happen to fall in your way. In order to judge satisfactorily from appearances like these, it were advisable to combine your own experience with the observations of others; and I need scarcely add, that no pains can be superfluous when bestowed for the purpose of putting us in possession of so capital a sign. Only conceive the importance of our being able to obtain evidence of a highly probable, if not a conclusive, character, from simply viewing the female mamma! I dare not, from any experience of my own, venture to assert that so high an amount of evidence can be procured from even the most careful inspection: but the authority of Dr. Montgomery, Dr. Hamilton of Edinburgh, and others who have recently devoted their attention to this subject, is sufficient to warrant me in pointing out to you the change of appearance in the areola as a sign of pregnancy worthy of your most especial notice.

Discoloration of the vagina.—As somewhat related to the alteration of colour just noticed, I may here introduce a few words respecting a curious diagnostic sign of pregnancy lately announced in Parent-Duchatelet's volumes. It appears that the extensive opportunities which M. Jacquemin has had, in examining the public women at the Dispensatory in Paris, have enabled that gentleman to discover a peculiarity belonging to the pregnant state—namely, a change of colour in the lining membrane of the vagina. It becomes of a

violet hue, or purplish, like the lees of wine. M. Jacquemin says he is never deceived in this appearance, and that he can depend upon it even without taking into account any of the other symptoms commonly observed. He has had, it seems, no less than 4,500 cases passing through his hands, and upon which he was enabled to prove the correctness of his diagnosis.

Should this be found eventually a good test of pregnancy, it will be of great importance in forensic medicine. In ordinary practice there would be strong objections to the employment of it,—while every facility would be afforded for observing the areola: but in medico-legal practice the awkwardness of applying the *speculum vaginæ* would, perhaps, be readily overlooked.

5. *Motions of the fœtus.*—The remaining signs are of what has been called a *sensible* nature, perceptible by the touch or hearing: they are derived more immediately from the presence of the fœtus, and are to be appreciated when the child is alive and healthy. We may perceive the movement of the fœtus by having recourse to a little management. Towards the conclusion of the fifth month, or even somewhat earlier (for some *quicken*, as it is called, that is, feel the first symptoms of the vitality of a being within them, earlier than others), the organs of locomotion in the fœtus are in such a state of activity as to become sensible to the hand applied on the exterior of the abdomen, and are even sometimes distinctly visible through the clothes of the female. It must, however, be recollected, that in some women, spasmodic contractions of the uterus and of the intestines may present very similar phenomena; and even experienced accoucheurs are said to have been deceived by relying upon this sign. What Dr. Gooch says on the subject—and he attaches very high importance to it—deserves to be quoted:—"If the hand is laid on the naked abdomen, between the pubes and the umbilicus, the fœtus will sometimes be felt to stir. As, however, it moves only occasionally, this may not happen during the examination. It is said that by dipping the hand in cold water, and laying it suddenly on the naked abdomen, the fœtus may be made to move. As I have long had the cold hand of a dyspeptic sufferer, I have no occasion to dip my hand in cold water; it is always cold enough to make the patient shrink, and by laying it suddenly on the naked abdomen, I have sometimes felt the child move, but this has been only an occasional occurrence. If distinctly felt, it is of course the most conclusive symptom."

Quickening.—Connected in some measure with this subject is the question of the fact of quickening. The phenomenon of quickening was supposed by the older physiologists to arise from the accession of life (as the term implies) to the fœtus at that period. But when we know that what is understood in general by *quickening* does not take place till between the fourth or fifth month after conception, we are prepared to reject that hypothesis, for we know that the communication of life is the immediate consequence, if not the very essence, of the act of conception.

It is more probable that *quickening*, so called, is the first impression made by the fœtus on the mother, the fœtus being then sufficiently developed, and sufficiently lively, to make a sensible impression on the mother by its movement.

Another hypothesis, of more recent date than the foregoing, is, that it arises from the sudden ascent of the uterus out of the pelvis, that viscus now requiring more room for its development.

But whatever be the true cause, the sensation to the mother is decisive. She generally compares it to something tapping within the uterus, or to the fluttering of a bird; and syncope often accompanies the first impression.

The time of quickening is not the same in different women, for it depends, 1st, on the acuteness of the mother's sensations; 2dly, on the strength of the fœtus; and 3dly, on the quantity of the liquor amnii present.

These remarks are not to be considered as made on a point merely curious: for the medical jurist may be particularly examined as to the fact of quickening, whether it has taken place or not: the crime of wilful abortion, for example, is either a capital felony, or one of a lower degree of guilt, according as the fact of quickening may have been ascertained or not. But the medical witness has no other means of solving the question, than by ascertaining the movement of the fœtus.

6. *State of the cervix uteri.*—The next sign to which I would direct your attention, is that which must be ascertained by the touch—*le toucher* of the French accoucheurs. In the unimpregnated state, it will be remembered that the cervix uteri forms a nipple-like prominence, which projects into the vagina about two-thirds of an inch. Shortly before delivery, it is found almost wholly obliterated, or nearly flat, to the finger. Now the obliteration is effected gradually, during the state of pregnancy, but a change does not begin to be perceived until about the fifth month. By the seventh, it has become much altered, very soft, broad, and short, and so on to the close of gestation. In making the examination requisite for ascertaining the state of the part, and thus judging of the stage of

pregnancy, the forefinger of the right hand is to be applied against the projection in the vagina, while the left hand is to be laid on the abdomen. By then pressing gently with the left hand downward, the finger in the vagina has full liberty to explore the shape and size of the cervix, at the same time that another observation may be made. By alternately forcing upward with the right forefinger, and downward with the left hand, we may assure ourselves that the tumor felt through the walls of the abdomen is the same as that felt through the vagina—the most satisfactory proof that it is an enlarged uterus. This method may be practised with effect as early as the fourth or fifth month: but it should be added, that the examination as to the form of the cervix cannot in general be successfully made until about the sixth. Both this examination and the former, relative to the movement of the fœtus, may be perhaps best effected, the female being recumbent. Dr. Gooch says, "the bladder should be empty, the woman in bed, in her night-dress, on her back, in a posture between sitting and lying, with the knees slightly drawn up."

Ballottement.—Another important point to be ascertained by the touch is the *ballottement*. It will be recollected that in the pregnant uterus the fœtus floats in the liquor amnii, and when the female who is to be examined is in the erect posture, the head of the fœtus, if there be one present, must rest over the top of the vagina. "Now, if the examiner," says Dr. Gooch, "applies his finger to the uterus, just in front of the neck, and gives it a push, the fœtus will float for an instant, and the next instant fall with perceptible weight on the point of the finger; this sensation, if once felt, can never be mistaken; it is scarcely inferior in conclusiveness to the muscular movements of the child, and has this advantage over the latter, that it can be felt, whether the fœtus is alive or dead." The best time for detecting this rebound, or *ballottement*, as the French call it, is from the fifth to the seventh month: the reason is obvious, when we consider the relative proportion of the liquor amnii to the bulk of the fœtus; "earlier than the fifth month the fœtus is too light to be felt; and later, it is often too closely packed to be moved."

7. *Auscultatory signs.*—I have reserved for the last, an account of the latest and best, method of ascertaining the existence of pregnancy—a method which, when successfully employed, not only assures us of the presence of the fœtus, but of its vitality. It is not applicable where the child is dead, or peculiarly placed in the uterus. But with these exceptions, the use of auscultation is attended with advantages to the medical jurist which cannot be too highly prized.

We are indebted to M. Kergaradec for the first hint of applying auscultation, with the naked ear, or the stethoscope, to the abdomen of the pregnant female. M. Mayor, of Geneva, preceded him, indeed, by a few years, in observing the pulsations of the fœtal heart through the abdominal parietes; but not having made any practical application of the fact, he has scarcely any claim as a discoverer. Through the stethoscope, M. Kergaradec detected two distinct systems of pulsation in the abdomen of the pregnant female—the one belonging to the fœtal heart, the other to the placenta. Let us suppose the woman five or six months gone with child: on applying the stethoscope or the naked ear to the middle space between the umbilicus and the crural arch on the left side, we shall probably hear a ticking sound like that of a watch; this is the beating of the fœtal heart, and the pulsations, which are *double*, are generally from about 120 to 160 in the minute, while perhaps the mother's pulse, reckoned by holding the wrist at the same time, does not exceed 70.

I may mention here, in passing, that there appears some contrariety in the statements of different observers respecting the rate of the fœtal pulse. Dr. Jeffray, of Glasgow, Dr. Hamilton, of Edinburgh, and others, maintain that the pulsation in the umbilical cord, and, of course, that of the fœtal heart, does not exceed *sixty* in the minute—nay, is rather less. So many able auscultators, besides Kergaradec, have satisfied themselves that the fœtal pulsation is at least double as quick as the Scotch professors allow it to be, that one cannot help suspecting that there is some mistake, and that probably both parties are really not so much at variance, after all. Dr. Hamilton, and those who are with him, allude particularly to the beating of the cord, and that about the period of labour; when, in fact, the first stage is over; or any stage, as it would seem, previous to respiration. The others trust to their ears, while yet there may be no symptom of labour commencing. Now may there not be an essential difference in the circumstances?—may not some change, hitherto not well observed, have taken place in the fœtal circulation, preparatory to the commencement of the respiratory process?—may not some new arrangement have occurred, the effect of which is to reduce the circulation of the fœtus in the number of beats? I feel so satisfied of the trustworthiness of both sets of observers, that I can only endeavour to reconcile them by thus imagining that each has been describing a different state of things. But to return to the phenomena.

Having observed the double pulsations, the stethoscope is next to be applied to another part of the abdomen; and here we shall probably find the beating of the other system, *single* pulsations, perfectly isochronous with the pulse of the mother. These are, moreover, attended with a peculiarity which distinguishes them from the beats of a common artery; they are characterized by a bellows-sound, or *bruit-de-soufflet*. This phenomenon, which is observed to be connected with the *placental* circulation, is said to be appreciable much earlier during gestation than the double beating already described: it may be perceived, according to some, even as early as the end of the *third* month, upon applying the stethoscope just above the pubes. But it is more probable that in general it cannot be detected till the fourth month.

It sometimes requires considerable patience before we can place the stethoscope so as to be able to hear what we are in quest of: the state of the woman's intestines, which may be distended with flatus, may deceive us; the position of the placenta in the uterus, its various attachments, sometimes even over the os tincæ, and the various positions of the fœtus itself, are all calculated occasionally to try our ingenuity as well as our good temper.

Conclusions respecting auscultation.—Three conclusions may be borne in mind, with respect to the use of the stethoscope, in attempting to ascertain pregnancy:—

(*a.*) That though we may be unable, after repeated trials, to hear *any* sound with the instrument applied to the abdomen, we are not to infer that pregnancy does not exist; for the fœtus may be dead, or very feeble, or so situated that we cannot hear either the beating of its heart or the circulation in the placenta.

(*b.*) That where we can hear nothing more than the placental pulsation, we are not justified in asserting that pregnancy exists; for perhaps the uterus may contain some other substance than a fœtus, or there may probably be some peculiar condition of the uterine vessels.

(*c.*) But that whenever we distinctly hear the double pulsations, with or without the placental souffle, we may affirm positively that the woman is pregnant. Nay, should we detect simultaneously another set of double pulsations, as sometimes happens, we may announce the fact of twin pregnancy.

Nor are these all the advantages to be derived from the use of the stethoscope in connexion with medico-legal inquiries. The auscultatory method will further inform us whether the pregnancy be extra-uterine or not: also, by its indications respecting the placenta, where may be the safest place of the abdomen on which to perform the Cæsarean section.

It would, I think, be superfluous to say more on the great importance of auscultation as a diagnostic aid to the medical jurist in determining the pregnant state; but I cannot refrain from suggesting one short piece of advice in conclusion, and that is, that you should avail yourselves of every opportunity of acquiring dexterity in this application of the stethoscope,—for it is by diligent practice alone that you can attain that degree of tact which will give satisfaction to yourselves, as well as to those who may require your opinion.

LECTURES
ON
MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LIII.

Gentlemen,—In this lecture I propose to examine those pharmacological agents yielded us by the order

APOCYNACEÆ.

The first and most important substance in this family is the Nux vomica.

Strychnos Nux vomica.

History.—We became acquainted with Nux vomica through the Arabian authors. In the Latin translation of one of the works of Serapion (who is supposed to have lived early in the eleventh century), we find the word nux vomica, but it appears to have been applied to some other substance (probably to St. Ignatius's bean). "Est nux," says he, "cujus color est inter glaucedinem et albedinem, major avellana parum et sunt in ea nodi." To which he afterwards adds, "movet vomitum;" from which I presume the name of *vomic*, or *vomiting nut*, was originally derived. It is probable that the *nux mechil* of Serapion is the substance which we denominate nux vomica.

Botanical history.—The following is a short abstract of the characters of this plant, taken from Roxburgh's "*Flora Indica*," to which I must refer for further information:—

The Nux vomica tree is of middling size, and is common in almost every part of the coast of Coromandel; flowering during the cold season. It belongs to class

Pentandria, order *Monogynia*, of the Linnean classification. The trunk is short, often crooked, and pretty thick; the branches irregular; the wood white, hard, and bitter. The leaves are opposite, oval, shining, entire, and from three to five nerved.

FIG. 142.—*Strychnos Nux vomica.*

The flowers are in small terminal corymbs, and are composed of a five-toothed calyx, a funnel-shaped, greenish white corolla, five stamina inserted over the bottom of the divisions of the corolla, a two-celled ovarium, a style the length of the tube of the corolla, and a capitate stigma.

The fruit is a round smooth berry, of the size of a pretty large apple, covered with a smooth, somewhat hard, shell, of a rich beautiful orange-colour when ripe; filled with a white, soft, gelatinous pulp, which is greedily eaten by many sorts of birds, and, therefore, seems perfectly innocent.

The seeds (*nuces vomicæ*) are several, immersed in the pulp of the berry and attached to a central placenta. As they occur in commerce they are round, peltate, scarcely an inch in diameter, nearly flat, or very slightly convex on one side, and concave on the other, and are surrounded by a filiform, annular stria. From their fancied resemblance to grey eyes, as well as from their being poisonous to crows, the Germans term them *Krähenaugen*, or *crows'-eyes*. In the centre of the ventral surface of the seed is the orbicular hilum or umbilicus.

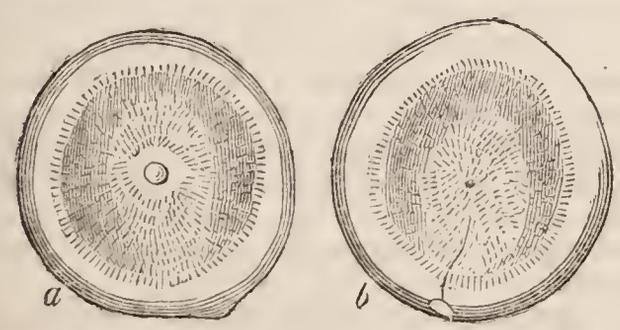

FIG. 143.—*Nux vomica.*

a, The convex surface.
b, The concave surface.

These seeds have two coats; the outer one, or *testa*, is simple, fibrous, and gives origin to short silky hairs, of an ash-grey or yellowish colour, and which are directed from the centre towards the circumference: within this is the inner coat, or *endopleura*, which is simple, and very thin, and envelops the nucleus of the seed.

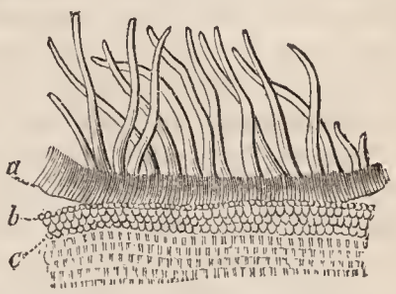

FIG. 144.—*Seed coats of Nux vomica.*

a, Testa, with the hairs attached to it.
b, Endopleura.
c, Albumen.

This nucleus is composed of two parts—namely, albumen and embryo. The *albumen* is bipartite, cartilaginous or horny, of a dirty-white colour, of an intensely bitter taste, and has in its interior a cavity (*loculamentum verum*). Unlike that of most seeds, the albumen nux of vomica is of a poisonous nature. The *embryo*, which is milk-white, is seated in the circumference of the seed, its locality being frequently indicated by a point somewhat more projecting than the surrounding parts. It consists of two large cordiform, acuminated, triple-ribbed, very thin cotyledons, a distinct caulieulus, and a centripetal radicle (*i. e.* a radicle directed towards the centre of the fruit).

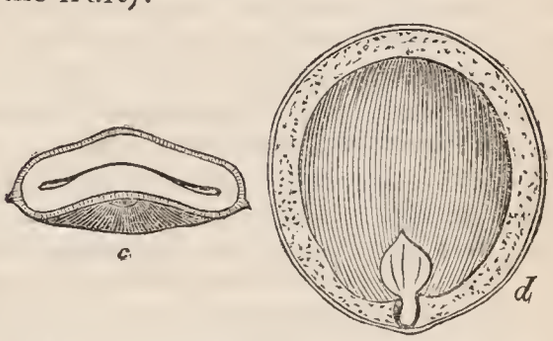

FIG. 145.—*Sections of Nux vomica.*

c, Transverse section of the seed.
d, The cavity laid open to shew the natural situation and figure of the embryo.

Chemical composition.—Several analyses of this seed have been published: but I shall pass over those made by Desportes, Braconnot, and Chevreul, and principally confine myself to that of Pelletier and Caventou, made in 1818. These celebrated chemists found the following substances:—

1. Strychnic or igasuric acid.
2. Strychnia } in combination with
3. Brucia } strychnic acid.
4. A little wax.
5. A concrete oil.
6. A yellow colouring matter.
7. Gum (a considerable quantity).

8. Starch (a little).
9. Bassorine.
11. Vegetable fibre.
12. In the ashes were found carbonate of lime and chloruret of potassium.

The *strychnic* or *igasuric acid*, mentioned in this analysis, in many of its properties agrees with malic acid, but is distinguished by the solubility of its alkaline salts in alcohol, and by its action on the salts of copper. Thus, when a solution of the ammoniacal sulphate of copper is added to the infusion of nux vomica, the liquid immediately becomes of an emerald green colour, and gradually deposits a greenish-white precipitate of the strychnate of copper; the ammoniacal sulphate of strychnia remaining in solution. In this action on the cupreous salts, strychnic agrees with meconic acid; from which we distinguish it by the red colour which meconic acid produces when added to the persalts of iron, and which is not developed by strychnic acid.

If nitric acid be mixed with the infusion or decoction of nux vomica, an orange-red colour is produced, by the action of the acid on the brucia and yellow colouring matter. A solution of iodine at first communicates a yellowish-brown tint to the decoction, but after a few minutes the colour disappears, the iodine being converted into hydriodate (and probably into iodate also) of strychnia and brucia, and is then no longer detectable by starch, unless nitric acid or chlorine be also added. The salts of iron communicate an emerald green colour to the infusion of nux vomica, which disappears on the addition of hydrochloric acid: this coloration does not depend, according to Pelletier and Caventou, on the strychnic acid; nor can it arise from tannic acid, since gelatine gives no indication of the presence of this acid. By boiling infusion of nux vomica with animal charcoal, it is deprived of this power of becoming green on the addition of ferruginous salts. Tannic acid, or infusion of galls, produces a copious precipitate with the infusion or decoction of nux vomica; but by heating the liquid the precipitate is dissolved. This precipitate consists of tannic acid, strychnia, brucia, and some other vegetable matter. Alcohol added to the infusion of nux vomica precipitates the gum. Acetate and subacetate of lead produce copious precipitates, composed of oxide of lead combined with strychnic acid, gum, and some fatty and colouring matter.

The wax mentioned in the above analysis seems to be derived from the hairs covering the seeds: it enables them to resist moisture. Some authors mention *resin* as a constituent of these seeds: its existence is very probable, since an alcoholic tincture of nux vomica becomes milky when mixed with water. By distillation with water, an *odorous, non-acid*, innocuous principle is procured. As the decoction of nux vomica undergoes the vinous fermentation, the presence of sugar has been presumed. Meissner says he found copper in the ashes of nux vomica, but I have never been able to detect it.

Physiological effects: 1. *On vegetables.* — Marcet states, that a quarter of an hour after immersing the root of a haricot plant (Phaseolus vulgaris) in a solution of five grains of the extract of nux vomica in an ounce of water, the petals became curved downwards, and in twelve hours the plant died. Fifteen grains of the same extract were inserted in the stem of a lilac tree, on the 15th of July, and the wound closed. In thirteen days the neighbouring leaves began to wither.

2. *On animals generally.*—Nux vomica appears to be poisonous, in a greater or less degree, to all classes of animals. On the vertebrata its effects are very uniform, though larger quantities are required to kill herbivorous than carnivorous animals. Thus a few grains will kill a dog, but some ounces are required to destroy a horse. It occasions in all, tetanic convulsions, increased sensibility to external impressions, asphyxia, and death.

3. *On man.*—We shall establish three degrees of the operation of nux vomica on man.

(*a.*) *First degree: tonic and diuretic effects.* —In very small and repeated doses, nux vomica usually promotes the appetite, assists the digestive process, increases the secretion of urine, and renders the excretion of this fluid more frequent. In some cases it acts slightly on the bowels, and occasionally produces a sudorific effect. The pulse is usually unaffected. In somewhat larger doses, the stomach not unfrequently becomes disordered, and the appetite impaired.

(*b.*) *Second degree: rigidity and convulsive contraction of the muscles.*—In larger doses, the effects of nux vomica manifest themselves by a disordered state of the muscular system. A feeling of weight and weakness in the limbs, and increased sensibility to external impressions, (of light, sound, touch, and variations of temperature), with depression of spirits and anxiety, are usually the precursory symptoms. The limbs tremble, and a slight rigidity or stiffness is experienced when an attempt is made to put the muscles into action. The patient experiences a difficulty in keeping the erect posture, and, in walking, frequently staggers. If, when this effect is beginning to be observed, you tap him suddenly in the ham while standing, you may frequently bring on a slight

convulsive paroxysm, so that he will have some difficulty to prevent himself from falling. I have often in this way been able to recognize the effect of nux vomica on the muscular system, before the patient had experienced any particular symptoms.

If the use of the medicine be still persevered in, these effects increase in intensity, and the voluntary muscles are thrown into a convulsed state by very slight causes. Thus, when the patient inspires more deeply than usual, or attempts to walk, or even to turn in bed, a convulsive paroxysm is brought on. The sudden contact of external bodies also acts like an electric shock on him. The further employment of nux vomica increases the severity of the symptoms; the paroxysms now occur without the agency of any evident exciting cause, and affect him even when lying perfectly quiet and still in bed. The muscular fibres of the pharynx, larynx, œsophagus, and bladder, also become affected, and Trousseau says those of the penis are likewise influenced, and the nocturnal and diurnal erections become inconvenient even in those who, for some time before, had lost somewhat of their virility. Females also, he says, experience more energetic venereal desires; and "we have," he adds, with great *naïveté*, "received confidential information on this point, which cannot be doubted."

The pulse does not appear to be uniformly affected; for the most part it is slightly increased in frequency between the convulsive attacks, but Trousseau says he has found it calm even when the dose of the medicine was sufficient to cause general muscular rigidity. Previous to the production of the affection of the muscles, various painful sensations are oftentimes experienced in the skin, which patients have compared to the creeping of insects (formication), or to the passage of an electric shock; and occasionally an eruption makes its appearance.

It is remarkable that in paralysis, the effects of nux vomica are principally observed in the paralysed parts. The formication and the convulsions here first manifest themselves; and Magendie states he has observed sweating confined to these parts. "I have seen," says this physiologist, "the affected side covered with an anomalous eruption, while the opposite side was free from it. One side of the tongue is sometimes sensible of a very bitter taste, which is not perceptible to the other side."

3. *Third degree*: *Tetanus and Asphyxia.*—I think I cannot do better than relate a case of poisoning by nux vomica reported by Mr. Ollier, in order to illustrate the third and most violent degree of operation of this drug. A young woman swallowed between three and four drachms of this substance in powder, and in half an hour was seen by Mr. Ollier. She was sitting by the fire, quite collected and tranquil; her pulse about 80, and regular. He left her for about ten minutes to procure an emetic, and on his return found that she had thrown herself back in her chair, and that her legs were extended, and considerably separated. She was perfectly sensible, and without pain, but seemed in alarm, laid hold of her husband's coat, and entreated him not to leave her. A perspiration had broken out on her skin, her pulse had become faint, and much quicker, and she called frequently for drink. She then had a slight and transient convulsion. Recovering from it, she was in great trepidation, kept fast her hold of her husband, and refused to let him go, even for the alleged purpose of getting her drink. In a few minutes after, she had another, and a more violent attack, and shortly afterwards, a third: the duration of these was from a minute and a half to two minutes. In them she retained her grasp; her whole body was straightened and stiffened, the legs pushed out and forced apart. I could not, says Mr. Ollier, perceive either pulse or respiration; the face and hands were livid, the muscles of the former, especially of the lips, violently agitated, and she made constantly a moaning, chattering noise. She was not unlike one in an epileptic fit, but did not struggle, though, as she was forced straight out, it became difficult to keep her from falling on the floor.

In the short interval of these attacks she was quite sensible; was tormented with incessant thirst; perspired; had a very quick and faint pulse; complained of being sick, and made many attempts to vomit. (I should state she had swallowed some ipecacuhana powder to evacuate the poison). She continued to refuse to let her husband move, and to the question whether she was in pain, replied, no—no—no!

A fourth and most vehement attack soon followed, in which the whole body was extended to the utmost, and she was rigidly stiff from head to foot, insomuch that, with all the force of the surgeon, he could not bend her thighs on the pelvis to replace her in her seat. From this she never recovered; she fell into a state of asphyxia, and never breathed again. She now relaxed her grasp; her discoloured hands dropped upon her knees; her face, too, was livid; the brows contracted; the lips wide apart, shewing the whole of the closed teeth, and a salivary foam issued plentifully from the corners of her mouth. The expression of the whole countenance was at this moment very

frightful. On removal of the body, it was discovered that the urine had been discharged. She died in about an hour after taking the poison. Five hours afterwards she was still as straight and stiff as a statue; if you lifted one of her hands, the whole body moved with it, but the face had become pale in comparison, and its expression more placid.

Post-mortem appearances.—In the case just related, the body was observed to be rigid after death, but in animals the reverse is generally noticed. As in other cases where death takes place from obstructed respiration, venous congestion is observed. Occasionally there is redness or inflammation of the alimentary canal, and now and then softening of the brain or spinal cord.

Modus operandi.—There are several points connected with the modus operandi of nux vomica, which require examination.

In the first place, is this seed a local irritant?—In medicinal doses it does not usually disorder the stomach, nor is it invariably irritant in its operation, even when swallowed as a poison. In some instances, however, the pain and heat in the stomach, the burning in the gullet, and the nausea and vomiting, are evidences of its local action; and in several cases marks of inflammation have been observed in the stomach on examination of the body after death.

Secondly, on what part of the body does nux vomica exercise a specific effect?—The symptoms clearly indicate the nervous system to be specifically affected. But what portion of it—the cerebro-spinal or the ganglionic system? As the voluntary muscles are supplied with nervous influence from the cerebro-spinal portion of the nervous system, it is presumed that it is on this portion that nux vomica exerts its principal or sole influence. Physiologists, however, have endeavoured to ascertain what part of the cerebro-spinal system was principally affected. Now the tetanic symptoms, and the absence of narcotism, have led to the conclusion that the spinal cord was the seat of the disease—a conclusion supported by the fact that the division of this cord—nay, even complete decollation, will not prevent the poisonous effects of nux vomica, whereas the destruction of the cord by the introduction of a piece of whalebone into the spinal canal causes the immediate cessation of the convulsions; and if only part of the cord be destroyed, the convulsions cease in that part of the body only which is supplied with nerves from the portion of medulla destroyed. These facts, then, originally observed by Magendie, and which I have myself verified, lead to the conclusion that the abnormal influence, whatever it may be, which causes the convulsions to take place, is not derived from the contents of the cranium, but from the medulla spinalis itself. Moreover, as the motor nerves seem principally affected, it has been presumed that the disorder is seated in the anterior columns of the cord. But the increased susceptibility to the influence of external agents clearly proves that the sensitive nerves, and, therefore, the posterior columns of the cord, are also in an abnormal state.

M. Flourens, a distinguished French physiologist, asserted that the part of the nervous system on which nux vomica more particularly acted, was the medulla oblongata. But MM. Orfila, Ollivier, and Drogartz, in their report on a case of poisoning by this substance, particularly mention that they observed no traces of alteration in the condition of the medulla oblongata, the tuber annulare, or the crura cerebri, which is in opposition to Flourens' opinion, for he asserted that the specific or exclusive action of each substance on each organ always left after death traces of its action, sufficient to distinguish the affected from other organs.

But it may be asked, is the cerebrum unaffected by nux vomica? I think we are hardly justified in replying to this in the affirmative. It is, indeed, true that the intellectual functions are not usually much disordered by this drug, but the mental anxiety commonly experienced by persons under its use, the occasional appearance of stupor, and the observations of Andral and Lallemand on the injurious effects of it in some apoplexies, leave no doubt that occasionally at least the cerebrum is affected.

The cerebellum is said by some to be acted on by nux vomica, but for the most part on hypothetical grounds, though it must be mentioned that MM. Orfila, Ollivier, and Drogartz, observed the cerebellum presented more evidences of lesions than the other parts of the nervous system. Another argument which probably would be advanced by phrenologists in favour of the affection of the cerebellum of this drug is the observation of Trousseau, that the sexual feelings are usually excited by it.

Serullas found, in his experiments on animals, that in some cases life could not be prolonged by artificial respiration, and that after death the heart could not be stimulated to contract. These and other reasons seem to show that nux vomica exhausts the irritability of the heart. But in all probability this viscus is affected only secondarily, the essential and primary action being on the nervous system.

Thirdly, what kind of action does nux vomica set up in those parts of the nervous system on which it acts?—As the muscles receive from the nervous system a preternatural stimu-

lus to action, it is presumed that this system (or at least certain parts of it) is in a state of excitement or irritation. In one case mentioned by Mr. Watt, there was observed softening of the lumbar portion of the spinal cord; and in the case reported by MM. Orfila, Ollivier, and Drogartz, the whole cortical substance of the brain, especially of the cerebellum, was softened. Andral and Lallemand have both observed that this remedy in some forms of apoplexy produced symptoms indicating ramollissement.

Fourthly, does nux vomica or its active principles become absorbed? — Several reasons, some of which have been before alluded to, may be adduced in favour of the affirmative of this question. Thus the blood of animals under the influence of this poison has been found to be poisonous (though Messrs. Morgan and Addison deny that this was the case in their before-mentioned experiments). Moreover, the activity of this drug seems to be in the ratio of the absorbing power of the part.

Fifthly, in what manner is death produced by nux vomica?—Frequently by the stoppage of respiration, in consequence of the spasmodic condition of the respiratory muscles. In other cases, death seems to arise from excessive exhaustion of the nervous power.

Uses.—I now proceed to notice some of the uses of nux vomica.

1. *In paralysis.*—Of all the diseases for which nux vomica has been employed, in none has it been so successful as paralysis; and it is deserving of notice, that this is one of the few remedies whose discovery is not the effect of mere chance, since Fouquier was led to its use by legitimate induction from observation of its physiological effects. That a remedy which stimulates so remarkably the muscular system to action should be serviceable when that system no longer receives its accustomed natural stimulus is, *à priori*, not astonishing. Paralysis, however, is the common effect of various lesions of the nervous centres, in some of which nux vomica may be injurious, in others useless, and in some beneficial. It is, therefore, necessary that I should point out to you under what circumstance this remedy is likely to be advantageous or hurtful.

A very frequent, and, indeed, the most common cause of paralysis, is hæmorrhage of the nervous centres. Blood may be effused on the external surface of these centres, into their cavities, or in their substance, the latter being by far the most common case, in the proportion, according to Andral, of 386 out of 392 instances of cerebral hæmorrhage. It is superfluous for me to say that the radical cure of these cases can be effected only by the removal (that is, absorption) of the effused blood. Now the process by which this is effected is almost entirely a natural one: art can offer no assistance of a positive kind, though by the removal of impeding causes she may be at times negatively useful. Nux vomica can, in such cases, be of no avail; on the contrary, it may be injurious.

The part immediately surrounding the sanguineous clot is usually much softened, a condition formerly regarded as the effect of the effusion. But Lallemand has satisfactorily shewn that it often, though not invariably, precedes the hæmorrhage. This softening, or *ramollissement*, as the French term it, is, according to the same authority, a constant and necessary result of an acute or chronic irritation; but the facts at present known do not warrant this generalization, since cases occur which apparently are unconnected with irritation. For this softening art can do but little; we have, in fact, no particular or uniform treatment. If we can connect with it any increased vascular action, of course bloodletting and the other antiphlogistic means are to be resorted to; whereas if the reverse condition of system exist—marked by great languor and debility, tonics and stimulants may be administered. Nux vomica in these cases offers no probability of benefit; on the contrary, we might suspect, that as it irritates the spinal cord, it might probably have the same effect on the brain, and hasten the production of softening. Now experience seems to confirm our theoretical anticipations. Andral relates the case of a man who was hemiplegic, in consequence of an old apoplectic attack. A pill containing only one-twelfth of a grain of strychnia (the active principle of nux vomica), was given him, and it produced a strong tetanic stiffness of the paralysed members. The following day he complained of pain in the head, on the side opposite to that paralysed; his intellectual functions were weaker, and his hemiplegia was increased; in fact, he had all the symptoms characterising softening of the brain. It is, therefore, probable that the strychnia set up an inflammatory condition of the nervous substance around the apoplectic deposit, and that this condition was the precursor of ramollissement. When, therefore, nux vomica is employed in those cases of paralysis which are connected with inflammation of the brain or spinal marrow, it is very likely to increase the evils it is intended to mitigate. Lallemand, in his *Researches anatomico-pathologiques sur l'Encéphale*, reports two cases in which this drug, administered against cerebral maladies, occasioned convulsive movements, which continued until death. On opening the

bodies, the cerebral substance surrounding the sanguineous clot was found disorganised and exceedingly softened. These remarks therefore, will, I trust, suggest some useful reflections as to the use of this powerful drug in paralysis, and prevent its indiscriminate use in all cases of this disease.

But there are cases in which paralysis, arising from cerebral hæmorrhage, may be advantageously treated by nux vomica. The blood which is poured out in the apoplectic cell has at first a gelatinous consistence, some of it still remaining fluid. "Somewhat later," says Andral, "twelve or fifteen days after the attack, for instance, the coagulum is found to be firmer and more circumscribed; later still, it becomes white or yellow, and is surrounded by a brownish-red fluid. The walls of the containing cavity are smooth, and lined with a delicate membrane. The surrounding cerebral substance in some cases retains its natural appearance, and in others is altered both in colour and consistence. As the interval between the effusion and the examination increases, the coagula gradually disappear." The cyst is now found to contain a serous fluid, occasionally having a few cellular bridles running from one side to the other; and nature subsequently attempts to get rid of the cyst by producing adhesion of its sides, leaving only a linear cicatrix. Now it is well known, that by long disuse of some of the voluntary muscles, the power over them becomes gradually diminished; and it appears that occasionally in cerebral hæmorrhage, after the absorption of the effused blood, the paralysis remains, as it were by habit. In these cases the cautious employment of nux vomica, or of its active principle, may be attended with beneficial results, by favouring the return both of motion and sensation.

But paralysis, like some other diseases of the nervous system, may exist without our being able to discover after death any lesion of the nervous centres; and it is then denominated a functional disorder, as if there were actually no organic lesion. To me, however, the fact of the lesion of action is a convincing proof that there must have been an organic lesion of some kind, though we see nothing. "It is highly probable," says Andral, "that some organic lesions do exist in such cases, though they escape our notice." Be this as it may, experience has fully established the fact, that nux vomica is more beneficial in those forms of paralysis usually unaccompanied with lesions of structure, such, for example, as paralysis resulting from exposure to the influence of lead and its various compounds. Thus, of ten cases of saturnine hemiplegia, treated by nux vomica or its active principles, and which are mentioned by Bayle in his *Travaux Thérapeutiques*, three were cured, and three ameliorated.

As hemiplegia more frequently depends on cerebral hæmorrhage than some other forms of paralysis, so it is, for the most part, less amenable to remedial means. Thus, while out of twenty-six cases of paraplegia, nineteen were cured by nux vomica or its active constituents, yet in thirty instances of hemiplegia only thirteen were cured. In six cases of general paralysis (that is, paralysis of both sides at once), four were cured by this remedy. In the paralysis which sometimes affects the muscles of certain organs, nux vomica (or stryehnia) has been employed with advantage. Thus a case of amaurosis, accompanied with paralysis of the eye-lid, is said to have been cured by it; and several cases of incontinence of urine, depending on paralysis, or diminished power of the muscular fibres of the bladder, have also been benefited by the same means.

2. *Lesions of sensibility.*—The good effects obtained from the use of nux vomica in paralysis have led to its employment in certain functional lesions of the organs of sensation. Hitherto, however, the trials have not been numerous, nor remarkably successful. In amaurosis benefit has been obtained in some few instances; and where no organic lesion is appreciable this remedy deserves a trial. The endermic method of using it has been preferred. Small blisters covered with powdered strychnia have been applied to the temples and eyebrows. The remedy causes sparks to be perceived in both eyes, especially the affected one; and it is said the more of these, the better should be the prognosis: moreover, the red-coloured sparks are thought more favourable than sparks of other colours.

3. *In other affections of the nervous system.*—Nux vomica has been used in chorea, hysteria, epilepsy, and hypochondriasis, with occasional benefit. Of course it is only applicable in the absence of irritation or inflammation of any of the nervous centres. I have seen it very serviceable in that shaking or trembling action of the muscles produced by habitual intoxication.

4. *In affections of the alimentary canal.*—On account of its bitterness nux vomica has sometimes been resorted to as a tonic and stomachic *in dyspeptic cases*, more especially when the symptoms are supposed to arise from, or be connected with, a diminished power in the muscular fibres of the stomach. In *dysentery*, particularly when of an epidemic nature, nux vomica has gained some reputation. Thus Hagstrom says he has proved its value in some hun-

dreds of cases of this disease. Hufeland employed it in one hundred and forty cases of epidemic dysentery with great benefit, most of the patients being cured on the second or third day. In *prolapsus of the rectum* Dr. Schwartz has recommended the use of this remedy, which he has employed for ten years, both in adults and children, with great benefit. One or two grains of the alcoholic extract are to be dissolved in two drachms of water; and of this solution he gives to suckling infants two or three drops; older children, from six to ten or fifteen drops, according to their age.

5. *In impotence.*—The excitement of the sexual feelings which Trousseau has seen produced by nux vomica, led him to employ this remedy against impotence; and he has found it successful both in males and females. In some cases, however, its good effects were observed only while the patients were taking the medicine. A young man, 25 years of age, of an athletic constitution, who had been married for eighteen months without having any other than almost fraternal communications with his wife, acquired his virility under the use of nux vomica, though he again lost it soon after leaving off its employment.

6. *Other uses.* — Besides the cases now mentioned, nux vomica has been employed in intermittents, intestinal worms, nervous colics, asthma, &c.

Modes of exhibition.—Nux vomica may be exhibited in the form of powder, tincture, or alcoholic extract. The dose of *powdered nux vomica* is two or three grains, gradually increased. Fouquier has sometimes increased the dose to fifty grains.

The *tincture of nux vomica* is ordered, by the Dublin College, to be made by digesting two ounces of scraped nux vomica in eight ounces of rectified spirit of wine,—from five to ten drops being given at a dose. This preparation is sometimes used as an embrocation to paralysed parts, and its good effects in this way seem increased by combining it with ammonia.

The *alcoholic extract* may be prepared by the evaporation of the tincture; but in the Dublin Pharmacopœia proof spirit is employed in its preparation. It is given in the form of pill, beginning with one grain for a dose, and gradually increasing the quantity.

It is somewhat surprising to find no preparation of nux vomica (strychnia excepted) in the new edition of the London Pharmacopœia just published.

Antidotes.—In the event of poisoning by nux vomica, the best method of treatment is the following. Evacuate the stomach as speedily as possible,—by the stomach-pump if at hand, and in the absence of this by emetics (of sulphate of zinc or sulphate of copper.)

As yet we know no certain chemical antidote for this poison; for several reasons lead me to doubt the value of iodine, bromine, and chlorine, recommended by Donné. On theoretical grounds I should expect infusion of astringent substances (as of galls) would be serviceable—an opinion in which Buchner coincides. According to Emmert's experience, vinegar and coffee increased the effects of the false angustura bark, and, therefore, it is advisable to abstain from using them in poisoning by nux vomica.

To relieve the spasms narcotics may be employed. Sachs and others have recommended opium for this purpose. According to Dr. Christison coneia is the counterpart to strychnia, and, hence, probably might be employed with advantage in poisoning by the latter, or by substances containing it. As the action of coneia and hemlock is, according to the same authority, identical, the latter will be a convenient substitute when the former cannot be procured.

Detection of nux vomica.—Nux vomica, unlike opium and some other vegetable poisons, may often be recognised in the stomachs of persons poisoned by it; and, therefore, it is of some importance to establish its characters. In a case of poisoning by this substance which occurred in France, MM. Orfila and Barruel were requested by M. le Procureur du Roi, to examine a parcel marked *mort-aux-rats* (rats-bane), containing a fallow grey powder, and which was found on the deceased's bed; and also to examine the contents of the stomach. The following extract from their report shews their mode of proceedings, and by which they were able to recognise the powder as that of nux vomica:—

1. *Characters of the powder of nux vomica.*—It has a fallow grey colour, a bitter taste, and a peculiar odour analogous to that of liquorice. Thrown on burning coals it inflames when the temperature is very high; but when lower, is decomposed, evolves a thick white smoke of a peculiar odour, and leaves a carbonaceous residuum. Concentrated sulphuric acid blackens it. Nitric acid communicates to it a *deep orange-yellow colour.* By boiling it for a few minutes in distilled water, there is obtained a yellowish, opaline, bitter liquid, whose colour is deepened by ammonia, and becomes reddish-yellow by nitric acid. Tincture as well as infusion of nut-galls causes a whitish precipitate. If the powder be digested with boiling water acidulated with sulphuric acid, the filtered liquor is turbid and slightly yellow. Nitric acid, after some minutes, reddens it; ammonia makes it brown, and precipitates blackish flocks.

2. *Characters of powdered nux vomica found*

in the stomach.—In the stomach and duodenum was found a greyish liquid. It was mixed with very dilute sulphuric acid, and boiled for ten minutes: by this means a yellowish liquid was obtained, which became of a *deep orange-yellow colour* by the addition of nitric acid. Its taste was acid, and sensibly bitter. After having saturated the excess of acid by carbonate of lime, the liquid was evaporated to dryness, and the residuum treated by successive portions of alcohol; the different portions of which being mixed, were found to possess a hot acrid taste, very similar to that of very concentrated alcohol, without at first evincing any bitterness; but subsequently this was developed. Evaporated to the consistence of syrup, the residuum had a bitter taste, similar to that of brucia and strychnia, and became *deep orange-yellow* coloured by nitric acid, and formed a flocculent precipitate by ammonia. At the end of two days the bottom of the capsule was covered with very visible crystals of strychnia.

In addition to this account, taken from the report before alluded to, I may add, that the green colour produced by the salts of iron, as well as by the cupreous salts, with an infusion or decoction of nux vomica, are important characters.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture I.

Introduction — Connexion between Diseases of different Organs; between Arthritis, Jaundice, and Urticaria; between Periostitis produced by abuse of Mercury, and Hypertrophy of the Liver—Details of cases illustrating this connexion—Its explanation—Hypertrophy of the Liver produced by Scrofula—Enlargement and Inflammation of the Liver after Scarlatina—Importance of recognising this disease.

Although it is customary to state, at the commencement of a course of clinical lectures, the mode of instruction the teacher intends to pursue, it is not my intention to dwell on the plan of communicating medical information adopted in this hospital, or the facilities, advantages, and inducements which it affords. I have spoken so often on the subject, and my opinions have been so long before the public, that I do not feel it necessary to enter into details on the present occasion. It is extremely satisfactory to me to find that the mode of clinical instruction which I introduced at this hospital in 1822, has been adopted in most of the Dublin hospitals, and in many of the medical institutions of Great Britain. It is now several years since I delivered an introductory lecture at the old Meath Hospital on the Coombe, setting forth the insufficiency of the clinical instruction imparted to the students in Dublin at that period, and proved, to the satisfaction of my auditors, that the German mode was infinitely superior. The lecture I then delivered was subsequently published in the London Medical Gazette*. This mode I soon afterwards introduced at this hospital, and it is a source of extreme gratification to me to find it adopted and approved of by so many medical teachers of established reputation. It is recommended at once by its simplicity, and by its admirable fitness for fulfilling the purposes which it is intended to accomplish. A card is suspended over each patient's bed, on which is recorded the date of his admission, the history of his case, and the daily treatment, dietetic as well as medical. These cards remain in the wards until the patient leaves the hospital, and in this way any gentleman who wishes to observe the progress and termination of any particular case, can easily make himself master of its principal features, and the different remedial agents employed for its alleviation or removal. I shall not dwell any longer on this subject, as my object at present is to excite you to a diligent cultivation of the many and valuable opportunities which this institution affords. Go round the wards, and observe the numerous and varied forms of disease they present. You will find in them many examples of morbid affections interesting alike to the student and the practitioner, and capable of affording practical lessons of inestimable value. He must be sadly deficient in zeal, attention, and every other quality necessary to constitute the accomplished and successful physician, who does not feel himself excited to study by what is there presented to his observation.

Did time permit, I should be glad to furnish you with an outline of the most interesting cases which have been under treatment in our wards for the last three months, in order to give you some idea of the prevailing forms of disease, and their most remarkable modifications; and in this way to prepare you for studying with more advantage the cases that may come under your notice during the ensuing session. We have had some cases of extreme interest during the months of August,

* See Medical Gazette, vol. x. p. 401.

September, and October; but I fear even a brief review of these would occupy more time than I could conveniently devote to the subject, and would interfere with matters of paramount importance. I have, however, kept records of these cases, and shall feel most happy to show them to any gentleman who may be anxious to peruse them. Before I proceed to make any observations on the cases at present in our wards, I shall give a statement of the most remarkable results obtained in the chronic wards, and the most important pathological observations made in the fever wards, during the last three months. This will occupy but two or three lectures, and in the interim I shall each day direct your attention to any thing of importance which occurs in the wards. It is my intention at present to limit myself to the illustration of some points connected with pathology, and to dwell merely on those prominent features of disease which bear a special reference to practical medicine; I shall afterwards give some lectures on fever. I shall not enter into any disquisition as to the origin and cause of fever; for these matters you must consult your books: all you can expect from me is to endeavour to impart to you some useful hints on the treatment of fever.

In order to acquire a correct and available knowledge of human pathology, and to extend the range and confirm the accuracy of diagnosis, it is of the utmost importance to observe attentively the connexion between the diseases of certain organs or systems of the body. You are aware that some organs, when labouring under disease, are apt, after the disease has continued some time, to implicate other organs, giving rise to various deranged conditions, which are developed, sometimes simultaneously, but in general consecutively, and in sequence. I have already pointed out several diseased actions thus associated together, each forming a link in the morbid chain. Now it is of the greatest importance to study each link, and ascertain the nature of its connexion, so as to have a distinct conception of the whole. Last session I directed the attention of my class to a train of morbid phenomena sometimes observed co-existing with arthritic inflammation. A person labouring under inflammation of the joints gets an attack of hepatitis, accompanied by jaundice, and this is followed by urticaria. I have observed this sequence of disease in eight or nine cases. The first was in a gentleman residing in Lower Mount-Street, whom I attended with Dr. Cheyne. This gentleman, in consequence of exposure to cold, was attacked with arthritic inflammation and fever. After he had been about ten days ill, he became suddenly jaundiced, and in a day or two afterwards a copious eruption of urticaria appeared over his body and limbs. Exactly the same train of phenomena, and in a similar order of succession, were observed in a man treated in the Meath Hospital in 1832. A short time before this, I had been attending a medical friend in Baggot-Street, who had been affected in the same way; and I mentioned to the class, as soon as I perceived the man was jaundiced, that he would most probably get urticaria. I made a similar prediction in a case which occurred recently in our wards, and it was verified by the event. Now this is not a mere fortuitous occurrence; the various symptoms must be connected in the relation of cause and effect. It is interesting to bear this in mind, and it is besides of considerable importance to the practising physician; it enables him to predict the appearance and form of disease, and inspires his patient with confidence in his opinions and judgment.

There is another sequence of disease, not unfrequently observed, but of which the connexion has not been hitherto noticed by any writer, as far as I can ascertain. About two years since, Mr. Crampton and I were consulted by an English gentleman, who had been ill for a considerable time. The history of his case from the commencement was this:—Three years previously he had venereal,—used and abused mercury, — was exposed to cold, and got periostitis. He now got into a bad state of health, used mercury a second time, obtained some relief, and then relapsed again; finally, after having used mercury three or four times, he was attacked with mercurial cachexy, became weak and emaciated; the periostitis degenerated into ostitis, producing superficial caries and nodes of a bad character; he had exfoliation of the bones of the cranium, and rupia, and was reduced to a most miserable state. Under our care the symptoms gradually disappeared; he recovered to all appearance, and even got fat. He then caught cold and relapsed again. At last his liver became engaged; he was attacked with hypertrophy of the liver, ascites, and jaundice, and died soon afterwards. Here, then, we have venereal, abuse of mercury, periostitic inflammation, abuse of mercury followed by exacerbation of the periostitis, and the establishment of mercurial cachexy, and the history of the case is wound up with hypertrophy of the liver. This was the first case in which I had observed this concatenation of diseases; since that period I have seen a similar train of morbid phenomena, twice in private practice and once in hospital. First we have

abuse of mercury, then periostic inflammation and mercurial cachexy, and the scene is closed by morbid enlargement of the liver. Now I do not look upon this sequence as merely fortuitous. The diseased actions are, I think, related as cause and effect, and each successive condition is consequent on the previous one. It may not be amiss to mention here some curious circumstances observed in the case to which I have just alluded. While this gentleman's liver was enlarging, there was no tenderness of the right hypochondrium on pressure. I have observed the same absence of tenderness in all the cases of this description which I have witnessed. The gentleman could bear pressure over the hepatic region without any inconvenience, and yet the liver was so enormously increased in size, that its inferior margin extended almost down to the pelvis. What is equally remarkable, he had no fever, and the tongue was perfectly clean and moist during the whole course of the hepatic affection. In my observations on a case in the fever ward, I remarked a few days since that some persons were too hasty in drawing inferences from the state of the tongue as to the existence of affections of the digestive organs. I shall not touch on this point, however, at present, and shall merely observe that this gentleman's tongue was perfectly clean and moist, notwithstanding the morbid condition and rapid growth of the liver. Another curious circumstance was, that during the hepatic affection, digestion appeared to go on very well, at least so far as the formation and due expulsion of fæces are concerned. The alvine evacuations were regular, and the matter discharged presented the form and consistence of that which is passed by a person in good health. But there was a peculiarity in it to which my attention was first directed by the patient, who was an intelligent and observant person. The cylinder of fæcal matter was composed of parts differing in colour and appearance: two or three inches consisted of pale clay-coloured substance; and immediately after this another portion, of about the same length, was observed, presenting the ordinary bilious or brown colour of natural excrement; and then again another mass of clay-coloured matter, without any obvious trace of bile. This appearance I have now frequently witnessed; and the inference to be drawn from it is this,—that in such forms of hepatic disease the functions of the liver are performed, as it were, intermittently; it secretes bile during a certain period of the digestive process, then stops, and then secretes again.

This peculiarity is noticed in many diseases of the liver; and it is important to remark, in attempting to explain the *rationale* of these hepatic affections, that in no disease of the liver is this symptom more frequently observed than in the scrofulous. Scrofulous disease of the liver is that state in which there is an increase of size in the organ, with induration and imperfect secretion, but without any remarkable tenderness. This condition in children is accompanied with irritability of the digestive organs, fretfulness, emaciation, loss of sleep, and impaired nutrition. The little patient becomes what is termed "pot-bellied," and labours under thirst, debility, and febrile excitement. This has been frequently called remittent fever, and disease of the mesenteric glands, but in my opinion unjustly. It is only a form of general cachexy connected with the scrofulous diathesis, affecting secretion and nutrition in general, and the digestive and biliary systems in particular. It would be quite wrong to imagine that, in this form of disease, the liver is the cause of the whole train of morbid phenomena; it is merely affected in common with other organs, and forms only an individual feature in the group of symptoms.

Now in this form of scrofulous cachexy, where you have diarrhœa, emaciation, fever, thirst, and restlessness, the liver is frequently affected in the manner already described; and in the loose stools of such a child, you will find one part bilious, another part clay-coloured; they will be yellow to-day, and pale the next, accordingly as the liver secretes bile or suspends its functions. But in this instance, I repeat that the liver is only one of many organs affected by the same general cachexy. Could we ascertain the derangements of other secreting organs with the same facility, it is very probable we should find similar evidences of the morbid influence which pervades the whole system.

This view of the question shews that you are not to expect to succeed in removing the disease by the use of calomel or any other mercurial preparation. Many of those persons whose practice is little better than routine, when called to treat a case of this description, first examine or inquire as to the nature of the alvine evacuations, and fixing on the single symptom of deficiency of bile, immediately prescribe calomel, to be repeated or continued until the secretion of the liver is established; but they forget that this state of the biliary system depends on the general state of health, and that the absence of bile is the consequence, and not the cause, of the disease. Almost all the organs of the body are affected; and though calomel may restore the secretion of the liver for a time, it cannot bring back the organ to its

natural state, or cure the disease. The malady is to be remedied in a different way: the secretions (and that of the liver among the rest) are to be improved by change of air, by an appropriate diet, by exercise, tepid or cold bathing, and the use of those remedies which are adapted to modify or correct that state of the system on which the general derangement depends.

An observation of such cases has led me to a train of reflection respecting the occurrence of the same order of symptoms in persons who have been injured by the abuse of mercury. Many persons who get venereal employ mercury injudiciously, and fall into what has been termed the mercurial cachexy, in which there is a general unhealthy state of the organs. A patient who has fallen into this state very closely resembles a scrofulous person, and is apt to labour under the same emaciation, impaired nutrition, irritability, feverishness, and the same sort of cutaneous, glandular, and periostitic affections. The chronic mercurial cachexy is very like the scrofulous, and attacks very nearly the same organs and tissues. Hence the difficulty of curing affections of the liver, and other organs, when they are the result of this depraved habit. This is the key to the explanation of those horrible ravages which we frequently witness in cases of venereal disease complicated with mercurial cachexy—a state of constitution which is closely allied to the scrofulous. You will frequently meet with this consecutive affection of the liver in cases of morbus coxæ, where the patient has been labouring for years under ulceration of the joint. The growth of the rest of the body appears checked, the patient is stunted and emaciated, while the liver increases rapidly in size. It was from observing the occurrence of liver disease in persons labouring under the scrofulous cachexy, that my attention was first turned to its occurrence in persons broken down by long or injudicious courses of mercury.

One word, gentlemen, as to the curability of hepatic affections of this kind. I believe that it is always an unpromising form of disease; but persons of originally good constitution, and under the age of thirty, will generally escape, if treated judiciously, and with proper care and attention. Some months ago I attended, with Dr. Marsh, a young gentleman labouring under this affection, as a consequence of the abuse of mercury. We found him greatly emaciated, and labouring under considerable enlargement of the liver, with commencing ascites. He had also great determination of blood to the abdomen, diarrhœa, and hæmorrhoids. By strict attention to his bowels, a well-regulated diet, change of air, and the use of taraxacum, conium, and hydriodate of potash, he was ultimately cured, after an illness of nearly two years, during which the liver had grown to an enormous size. I may state that he is at present in good health, and that the liver is nearly reduced to its natural dimensions. It may be proper to add, that this gentleman's age is about four-and-twenty.

I observed one circumstance in the progress of this case which is worth noting. He was suddenly attacked with a papular form of purpura, accompanied by much tingling and itchiness, and answering to the description given of *Purpura urticans*. This peculiar eruption was very troublesome at night, and formed several successive crops, which altogether lasted a month. It occupied the extremities, upper and lower, and was very abundant on the latter. This gentleman wore a bandage, to relieve a varicose state of the veins of the left leg. Now the eruption never appeared in the parts subjected to the pressure of the bandage, although it was very thick immediately below and above those parts.

In persons below thirty the liver may become enlarged to a very considerable extent, and yet return again to its natural size under proper treatment. I could point out several persons in Dublin in whom the liver had been so much enlarged that I thought their cases hopeless, and yet they have recovered, and are at present in the enjoyment of good health. The process by which the organ returns to its natural state and dimensions is generally slow; in two or three cases it occupied a space of time varying from one to two years. I attended a gentleman some time ago with Mr. Carmichael; and from the history of the case, as well as the symptoms present, we were induced to look upon it as incurable; and yet the patient has completely recovered. Mr. Macnamara and I attended a lady who had a very remarkable enlargement of the liver, but in the course of a year the viscus diminished so much in size, as to be very little above the normal dimensions. This is a matter of no common interest, for cases of this description have been generally looked upon as beyond the reach of medical aid. You should therefore be very careful in your prognosis of such cases, and not give them up at once as incurable.

I may observe in conclusion, that it is entirely as the result of the cachectic habit that this enlargement of the liver is observed. I have assumed this principle as the basis of my argument, and I think it is founded in fact and truth. It is also curious to observe, that the same cachectic

state which gives rise to emaciation and decay of the body, generally occasions hypertrophy of some particular organs. What we most commonly observe in such conditions is, general wasting of the system, accompanied by increased morbid nutrition in certain organs. This appears to be the general law. You perceive that in the explanation I have given, I have supposed that enlarged liver is the result of a general cachectic state of the system, and it is of importance to recollect that this state may be brought on by the injudicious exhibition of mercury, or by carrying mercurialization further than the constitution will bear. In this instance we are compelled to allow that our practice may furnish weapons to be turned against us by the disciples of homœopathy. It cannot, however, be denied, that the immoderate use of mercury has been productive of liver disease. The late Mr. Hewson pointed out this to the attention of those who visited the Lock Hospital while under his care. At this period it was the custom to salivate every patient, and keep him under the full mercurial influence for a month or two; and it frequently happened that, just as the mercurial course was finished, the patient got disease and enlargement of the liver. Were I inclined to theorize, I might perhaps offer some fanciful hypothesis in explanation of this occurrence, and might trace some connexion between the stimulant effects of mercury on the liver, and the subsequent hypertrophy. I shall, however, content myself at present with noticing the fact, and leave the explanation to my juniors, who always explain matters, according to my observation, much more readily than their seniors.

There are also other diseased states of the system, in which we have enlargement and morbid alteration of the liver. I can point out to you four different states of the system in which hypertrophy and disease of the liver forms one of the results of the general affection of the system. The next of those to which I shall direct your attention is scarlatina. Those who have attended the wards during the past month have seen examples of this. We have observed during the same week two patients labouring under scarlatina, who got disease of the liver and jaundice. One of the patients, a little boy, was attacked with the disease in an extremely violent form, accompanied with high fever, and a very remarkable eruption. In a few hours after the exanthema appeared, the entire cutaneous surface was dyed of a brilliant red; in fact, the skin looked as if it had been painted over, and there was not a single spot free. In cases of this kind the violence of the cutaneous inflammation is sufficient to kill, without any other unfavourable complication; and the patient seldom lives more than three or four days. You observed in this case, that the whole epidermis peeled off. But what I wish to direct your attention to is, that this boy after two days had evident symptoms of disease and enlargement of the liver. A young man, in the same ward, had also an attack of scarlatina, but in a milder form. On the third day he likewise got inflammation of the liver, but was cured by general and local antiphlogistic treatment. You are aware that scarlatina is one of those diseases in which a train of unfavourable sequelæ are apt to remain after the removal of the original complaint. Persons, after recovering from the exanthematous fever, will sometimes get into a bad state of health, and instead of convalescing, become restless and feverish towards evening—have an irritable jerking pulse, hot skin, derangement of the digestive organs, diminished urinary secretion, and finally become dropsical. Now, from observing the supervention of hepatic disease in such cases, both in hospital and private practice, my attention has been directed to the liver; and I never omit making an examination of that organ when called to treat those symptoms which are looked upon as the sequelæ of scarlatina. In many of these patients I have found the liver in a state of inflammation of rather a chronic character, and without any of that remarkable pain or tenderness which characterizes acute hepatitis. But still it was inflamed, as proved by the benefit derived from local antiphlogistic means; and, moreover, its condition appeared to retard and prevent convalescence. Not long since, a friend of mine, a very intelligent practitioner, who was attending a case of this description, and had tried a variety of remedies without any benefit, was very much surprised when I drew down the bed-clothes and showed him that the liver was diseased. He had not thought of the existence of any thing like an hepatic affection, and was very much surprised that his treatment had proved so ineffectual. By the use of leeches to the right hypochondrium, the employment of mercury, and a proper regulation of diet, the patient was soon relieved, and the fever, thirst, and anasarca, quickly disappeared. In cases of this kind the hepatic affection is the result of the general inflammatory diathesis superinduced by scarlatina. You are all aware that nothing is more common, after scarlatina, than inflammation of various organs. Thus some persons are attacked with pleuritis, some with pneumonia, others with inflammation of the liver. Many persons continue in a valetudinary

state after the eruption has declined; they do not convalesce according to our expectations; the pulse remains rather quicker than natural; the bowels are deranged; the appetite bad; thirst urgent, and urine scanty. In many of these cases you will find that there is a species of chronic hepatitis going on, which keeps up the feverishness and retards convalescence. This is a point of great importance, to which I am the more anxious to draw your attention, because even the latest writers on scarlatina have either entirely omitted or very insufficiently noticed it.

OPPOSITE MODES OF PRACTICE IN THE TREATMENT OF INFLAMMATION.

To the Editor of the Medical Gazette.

SIR,

I BEG to be allowed to reply to Investigator's remarks upon what he is pleased to denominate "the new-fangled doctrines *."

It should first be observed that your correspondent assumes a name which does not belong to him; it is evident that his proper name is "Conservative," for he complains that "long-cherished medical theories and modes of practice are (being) abandoned." While charging me with *inconsistency*, he does not perceive his own: he denominates himself an Investigator, and pretends to be a matter-of-fact man, by denouncing any new principles of practice as "new-fangled," and proofs of a "professional mania." In what manner should a person prepare himself in order *consistently* to pronounce his *dictum* against either new or old doctrines in medicine? Certainly by patient inquiry, and by the test of facts. But the *soi-disant* Investigator opposes his *mere words of the moment* to *facts*, which have required many years to collect and investigate. To use no harsher expression, it is neither philosophical nor fair in an individual who is acquainted with only one side of the question, to condemn the conclusions of those who have examined both: for my own part, I should be very reluctant to raise prejudices against Mr. Radley's method of treating fractured bones, merely because it was new to me: nay, further, since he has practised according to the old "cherished" system as well as the new, and asserts that the latter is attended with decided advantages over the former, and confirms them by the relation of cases. I certainly should, if I became the subject of fracture, request that his plan of treatment might be adopted.

Then in allusion to Investigator's denouncement of homœopathy as another "mania;" how much more like a true Investigator would he have been if he had first made trial of it.

And now with regard to my own "mania" of treating inflammatory diseases upon a system opposed to the current practice of the day, I beg to state that during the first ten years I was engaged in the medical profession, I pursued the strict antiphlogistic system in the treatment of inflammatory diseases, having been taught so to do, and that when I met with fatal cases I in general ascribed the want of success to not being bold enough in the abstraction of blood; and this notion became so strong in my mind, that during two years previous to my relinquishing this mode of practice altogether, I phlebotomised copiously, and at very short intervals, in order to anticipate and prevent the reaction which so frequently ensued; this practice, however, was attended with still more fatality and vexation. I was then advised by the late Dr. Armstrong to administer one or two doses of calomel and opium, after each abstraction of blood, which certainly did considerably allay the inordinate vascular action. In the spring of 1822, I had an interview with Dr. Darwin, of Shrewsbury, relative to a patient: in conversation, he stated that he considered all pulsations above 90 or 100 in a minute were indications of debility, and not of the degree of inflammation, to which I fully assented, and mentioned Dr. Armstrong's method of controlling this irritable action, when Dr. Darwin replied that if I could thoroughly examine the effects of bleeding, I should not long remain so strong an advocate for the practice.

Although these were the only remarks which occurred between Dr. Darwin and myself upon the subject, yet, having already had the greatest reason to doubt the efficacy of general bleeding as a remedy, I immediately turned my attention to the other side of the question, and was soon convinced by the happy results of this new system of practice,

* MED. GAZ. present vol. p. 202, *ante*.

that the old "cherished" system was founded in error. I have ever since—during fourteen years—been observant of their respective merits; and having well considered them, I felt justified in recently presenting in the Lancet this "new-fangled doctrine" to the consideration of the profession, and think that no one can with propriety condemn it until he has proved it to be fallacious: but since Investigator has not regarded this just order of proceeding, he is bound in justice to make a fair trial of the practice he so prematurely condemns, and to report the results.

There is but one point among Investigator's remarks deserving serious notice, and that not on account of its arising out of an impartial inquiry, but on account of its being a misrepresentation, as the following quotations will prove. First his quotation blended with his remarks. "The medicinal treatment, we are told, depends much upon the character of the inflammatory fever. When the general circulation is inordinately increased, and when considerable pyrexia attends subacute inflammation, sedative medicines, such as tartarized antimony and digitalis, are recommended, though upon what principle it is difficult to imagine; for every one must, I think, perceive that if it be right, in the dietetic treatment of the constitution, to increase the general circulation, by the fearless administration of milk, beer, wine and water, eggs, and good broth, that it cannot at the same time be proper in the medical treatment, to lower the vascular action by means of tartarized antimony and digitalis. But it happens that this treatment can seldom be put into execution; for when emetic tartar is given in doses sufficiently large to produce a sedative effect, it never fails at the same time, to cause severe nausea: so that when a patient is under the influence of that medicine, his stomach, which must be in a very unfit state to receive eggs and broth, will necessarily rebel against those good things, and either refuse them admittance, or eject them soon after their entrance. As far, therefore, as regards the constitution, it must, I think, be plain that the treatment recommended for it by Mr. Searle is inconsistent and often impracticable."

According to the above remarks of Investigator, it is made to appear that it is my practice, in the treatment of inflammatory diseases, to give food freely with one hand, and tartarized antimony with the other. Why did he not give a full quotation? Because he could not then have indulged in his disingenuous observations; for they are anticipated and answered, as the following full quotation will shew:—

"The medicinal treatment depends much upon the character of the inflammatory fever. If considerable pyrexia attend subacute inflammation, it is evident that the predisposing cause, excitability, is greater than the exciting cause, inflammation. Under these circumstances, febrifuge medicines, especially those of a sedative nature, as tartarized antimony, digitalis, &c. will, in general, produce a beneficial effect. But if, as in acute inflammation, the exciting cause play the greater part, then febrifuge medicines will avail but little. Sedative medicines would appear, *à priori*, to be indicated whenever the general circulation is inordinately increased; but very high and strong arterial action cannot be controlled by sedative medicines, as tartarized antimony and digitalis; for small doses of these medicines have no effect, while large doses occasion vomitings, which are often distressing and injurious to inflamed organs; and unless they produce a uniform sedative effect, they are pernicious, as temporary depression of the circulation induces reaction, and thus defeats the object to be attained; and to nauseate the stomach without subduing the disease is worse than useless, as it renders the patient incapable of taking that nutriment which, of itself alone, would, according to the views which have been already given of the nature of inflammatory fever, tend to diminish the pyrexia.

"The sedative agency of cold may be often employed advantageously, by placing the patient, who should at the same time be thinly clothed, in a current of cool air. No kind of danger need be apprehended from this exposure, unless the phlegmasia have originated from revulsion of blood, occasioned by exposure to cold; then, indeed, to renew the original cause of the disease would be committing the folly of adding fuel to fire. In such cases calomel and opium in combination form an exceedingly useful sedative, producing a general and uniform effect. While they allay inordinate action, they maintain an equal distribu-

tion of blood; if they fail to induce sleep they compose both mind and body; they alleviate delirium when it exists, and in other cases prevent its occurrence."

It is clear that I mean by tartarized antimony, digitalis, &c., the whole catalogue of sedative medicines. I placed tartarized antimony at the head because it is most frequently employed by the profession, and because I wished to make considerable strictures upon its use. So far from its being a favourite remedy of mine, I prefer calomel and opium, or any other medicine which will not nauseate the stomach; in short, I do not believe that ten prescriptions could be produced, in which I had recommended, within the last six years, tartarized antimony as an internal remedy, whilst hundreds might be brought forward of my having prescribed calomel and opium. But let it be supposed that the "&c." had been really omitted, and that I intended to recommend tartarized antimony only, to what cases have I restricted its administration? To those in which considerable pyrexia attends subacute inflammation. Under what circumstances does this form of pyrexia occur? The patients are either very young children, or of very delicate constitutions. Under the former, tartarized antimony is never given, nor even thought of, and under the latter the patients are such as habitually take but little food, and when ill, manifest, in general, an insuperable aversion to it. In such cases there can be no inconsistency in administering tartarized antimony. So that if I had made no more comments upon this medicine than those which were convenient for Investigator partially to quote, his charge of inconsistency would, even then, have been perfectly groundless.

Investigator has yet to learn that if nutriment be fearlessly and judiciously administered at the commencement of an attack of intestinal inflammation—when it can, in general, be taken—the inflammatory fever, if it exist at all, will scarcely ever become so high as to merit any special attention, and that the inflammation itself will not often assume a very acute character. If he were a real investigator, he would soon discover that the acute and dangerous characters which sometimes accompany inflammation are almost always owing to the large abstractions of blood, and the privation of nutriment which the strict antiphlogistic system of treatment enjoins.

Although Investigator is pleased to denominate the system of practice I am advocating "a mania," he will, most probably, on some future day look back with horror, as I now do, on his present favourite and "long-cherished" system, as one which has converted a number of cases of mild into acute and alarming forms of inflammation, which has impaired numbers of good constitutions, and which has destroyed many lives.

I am, sir,
Your obedient servant,
HENRY SEARLE.

Kennington, Dec. 6, 1836.

ON THE

RECENT CASE OF SUPPOSED POISONING WITH UNSOUND BACON.

To the Editor of the Medical Gazette.

SIR,

IN consequence of a report of the inquest held at the Westminster Hospital, on the body of Caroline Jones, appearing in your journal of the 10th inst., in which a verdict was brought in that "the death of the deceased was caused by eating unwholesome bacon," I beg to offer a few observations on the case; which, previous to admission into the hospital, was under my care.

Caroline Jones, æt. 14, was admitted a patient at the Chelsea Dispensary, on 25th October. As she was too ill to come to the institution, and was confined to bed, I visited her at her own home. She complained much of pain in the back and limbs, and general uneasiness and restlessness. There was considerable headache, a dry and foul tongue, mucous sordes about the mouth, thirst, no appetite, hot skin, quick pulse, cough, with pain in the chest; over the fore part of which, slight sonorous rattle was general. She had been ill about ten days, and the only cause which the mother then assigned as the origin of her illness, was her having been exposed to fatigue and cold during her journey up from Gloucestershire by the waggon, in which she had slept two nights on the road: two or three weeks had since elapsed. Leeches were ordered to be applied to the chest and

head, and the hair to be cut close. A purgative and diaphoretics were administered. The pain in the chest and cough shortly disappeared, and the headache was relieved. A few days afterwards, she complained of pain in the bowels, with much purging, and there was considerable tenderness of the abdomen on pressure. She had leeches, followed by poultices, applied twice. Small doses of hyd. c. creta, with pulv. ipecac. comp. were given, and subsequently the mist. cretæ, with a few drops of tinct. opii; under which treatment the pain of abdomen and diarrhœa ceased, and she was evidently getting better. On my next visit, after an interval of two days, I found she had been up in the meantime, and had felt tolerably free from complaint, and that her appetite having returned, she had probably indulged it too freely, as the fever had increased, and the pain in abdomen and diarrhœa had returned. I have since learned that on both days, besides meat at dinner, she had taken pickled cabbage, with half a pint of porter and wine. At the solicitation of the mother, who, in consequence of having so young a family, and of the sickness of another daughter, said she was unable to pay proper attention to her, I gave her a letter to the Westminster Hospital, with strict injunctions to guard against cold; but either from being too early at the hospital, or some other cause, she tells me her daughter was kept in the waiting-room for three hours, which, together with exposure to cold in the coach on her way there, no doubt caused an aggravation of the symptoms.

Such is the case, so far as I attended it; and independent of the history, as since given by the father on the inquest, we should have no hesitation in considering it simply as an instance of continued fever, complicated with abdominal affection. The question is, whether that evidence can be so relied on as that we can have no doubt that the fever and subsequent death were solely the result of eating unwholesome meat. At the time when it is stated that all who partook of the bacon were so seriously affected, the eldest son, a boy of about twelve years of age, was under my care for chorea, and was attending the dispensary twice a week with his mother; and although he is said to have suffered from pain and vomiting, no notice was taken of it to me at the time. During my whole attendance on the girl it was never mentioned; nor in a letter which the father wrote to me during her stay in the hospital, requesting my advice, as she was getting worse, if she might be removed home; nor on my being asked to prescribe for a younger sister a few days after the elder had become a patient of the dispensary; nor was the slightest account given of such an occurrence after her admission into the hospital, till within three days of her death. I can hardly think that on all these occasions, had the symptoms occasioned by eating the bacon been as serious and violent as since stated, it could have escaped recollection to have named it as the probable origin of the disease. That sickness was caused, I do not doubt; but I fully believe, on inquiry, that the effects produced have been much exaggerated, — perhaps unintentionally, — for we know how prone people are to attribute their complaints to any unusual cause. I know not if there be any case on record in which the symptoms produced by eating unwholesome meat so exactly resemble those of continued fever.

Dr. Christison, in his excellent work on Poisons, thus details the symptoms, on the authority of Kerner and others, occasioned by sausages which had become poisonous; and perhaps I shall be excused for quoting the passage entire. "The symptoms of poisoning seldom begin till twenty-four, or even forty-eight, hours after the noxious meal, and rather later than earlier. The tardiness of their approach seems owing to the great indigestibility of the fatty matter with which the active principle is mixed. The first symptoms are, pain in the stomach, vomiting, purging, and dryness of the mouth and nose. The eyes, eyelid, and pupils, then become fixed and motionless; the voice is rendered hoarse, or is lost altogether; the power of swallowing is much impaired; the pulse gradually fails, frequent swoonings ensue, and the skin becomes cold and insensible. The secretions and excretions, with the exception of the urine, are then commonly suspended; but sometimes profuse diarrhœa continues throughout. The appetite is not impaired; fever is rarely present; and the mind continues to the last unclouded. Fatal cases end with con-

vulsions and oppressed breathing, between the third and eighth day. In cases of recovery, the period of convalescence may be protracted to several years. The chief appearances on the dead body are, the signs of inflammation in the mucous membrane of the alimentary canal, whiteness and dryness of the throat, thickening of the gullet, redness of the stomach and intestines; also croupy disposition in the windpipe; great flaccidity of the heart; and a tendency in the whole body to resist putrefaction *."

Similar effects have been produced by bacon. In an account of an accident of the kind given by M. Ollivier, three members of a family at Paris, after eating ham-pie, were seized with shivering, cold sweats, violent pain in the stomach, frequent vomiting, burning thirst, excessive tenderness of the belly, profuse purging, and colic; but the symptoms did not come on till the day after partaking of the pie; and other customers of the pastry-cook who supplied it had been similarly affected. They all recovered. In the above case it is stated by the father that he himself found it disagree with him while eating; the son vomited during dinner; the daughter was taken ill about three hours after; and the mother in the course of the night. We know not how far the purging was the result of eating the bacon, as the father immediately dosed them all with calomel. The post-mortem appearances were those which are found after fatal cases of protracted fever; there was no ulceration of the stomach, as stated in the report of the inquest; but numerous ulcerations were found in the ileum, near the ileo-cœcal valve, one of which had penetrated all the coats of the bowel. On reviewing the whole of the circumstances, I think we ought to pause before placing this on record as an undoubted instance of death proceeding from poison generated in unsound bacon.—I am, sir,

Your most obedient servant,

JOHN BARR, M.D.

Physician to the Chelsea Dispensary.

18, Sloane-Street, Dec. 16, 1836.

* Christison on Poisons, 3d edit. p. 585.

SOME REMARKS ON PECTORILOQUY.

To the Editor of the Medical Gazette.

SIR,

IN speaking of pectoriloquy, Laënnec recommended the application of the stethoscope to the larynx and trachea of a healthy individual, as a means of acquiring a good idea of this sign. At this stage of his proceedings pectoriloquy was for him "la transmission évidente de la voix à travers le cylindre"; and having first noticed it in ulcerated cavities from the softening down of tubercles, he appears at that time to have considered such transmission, and such cavities, as essentially connected, although the examples of the larynx and trachea were calculated to excite doubts on this point. If we constantly bear in mind this first strong impression of Laënnec as to the connexion between "ulcerated tubercles",* and the passage of the voice up the tube, we shall find in it an explanation of some of the confusion to be met with in his work, on the subject of pectoriloquy, and which seems not to be altogether banished from the minds of several of his followers.

Subsequent researches, however, proved on the one hand, that "ulcerated tubercles" do not always give transmission of the voice up the tube, and on the other, that this transmission might be produced without any such ulcer; so that he came afterwards to give the name of pectoriloquy to some cases in which there was no transmission of the voice, although he refused it to others in which such transmission was produced by consolidation of the lung surrounding a bronchial tube. Still, however, the passage of the voice up the tube appears to have maintained a high place in the mind of Laënnec; and the undue importance attached to it as a sign has, I think, been a source of much mischief.

The attention of the student has in this way been withdrawn from what is, in my opinion, the most valuable auscultatory sign of a cavern (so far as the voice is concerned — namely, a sensation that the space in which the voice plays *is* "circumscribed;" such space not existing naturally in the

* "Tubercules ulcerés," an expression of Laënnec which is sufficiently intelligible.

part of the lung from which the sensation is communicated.

To this sign Laënnec has not, I think, given a sufficiently prominent situation; he has not sufficiently insisted upon its perception as the "sine quâ non" of a generally correct diagnosis (by the voice) of a "circumscribed space."

The extension which he gave to the term pectoriloquy, in applying it to some cases where the "transmission de la voix n'est pas évidente," as well as to some in which "la résonnance est très faible," was calculated to create inextricable confusion; and such has been the result. Even in cases of ulcerated cavity in the lungs, where there is a strong resonance under the stethoscope, with or without some transmission* of the voice, these circumstances are perhaps as often connected with the bronchi as with the cavity itself; and not only so, but the modification of sound proceeding from the cavity, may be little or not at all attended to, on account of the stronger resonance in the bronchi. In such cases the auscultator is confirmed in his error, by finding after death the cavity which he had predicted, and the existence of which was in his opinion indicated by what he calls pectoriloquy.

The next case which he meets with presents, perhaps, the same sounds as the last; he confidently predicts the existence of a cavern, but finds to his astonishment, if the patient dies, that there is nothing of the kind.

Now I think such mistakes would be less frequent, if, from the commencement of his auscultatory career, the student's attention were strongly fixed upon the advantage of being able to appreciate the circumstance above mentioned, viz. "the resonance of the voice in a circumscribed space."

The practice so generally adopted of representing auscultation, by implication at least, as one of the most easy studies on which a medical pupil can enter (it being in reality one of the most difficult) is attended with serious disadvantages.

The pupil who has thus been encouraged to commence the study of it with ardour and zeal, is the more mortified and discouraged when, after having pursued it for years, he finds himself frequently in doubts and difficulties on those very points concerning which auscultation had appeared to hold out the fairest promises.

What is pectoriloquy*?

What is it a sign of?

The chances are that the two first auscultators (not beginners) you meet with, will differ on one or both these points; nor can you be sure that even the most recent authors will be free from variations or contradictions on this subject. Those writers and lecturers, however, who try to allure on our ingenuous youths in the way above mentioned, may prove that they are acting on a principle which has the sanction of antiquity,

"ut pueris olim dant crustula blandi
Doctores, elementa velint ut discere prima."

I remain, sir,
Your obedient servant,
EDWIN HARRISON.

Grove Terrace, Lisson Grove,
Dec. 19, 1836.

* Cases of decided transmission through the whole length of the stethoscope are perhaps rather exceptions, independent of those where there is only a resonance under it.

* If I recur again to pectoriloquy, it is certainly not from lack of subjects calculated to illustrate the difficulties—the *extreme* difficulties—which are met with in the study of auscultation.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Elements of Medicine. Vol. I. *On Morbid Poisons.* By ROBERT WILLIAMS, M. D., Trinity College, Cambridge; Fellow of the Royal College of Physicians; and Senior Physician of St. Thomas's Hospital.

MANY will refuse their assent to the leading propositions adduced by Dr. Williams, but no candid person will deny that the volume exhibits very considerable talent and originality. Though professing to consist of "Elements," we cannot recommend it to the student, for it requires some previous reading, and some practical familiarity with the diseases treated of, to enable any one to judge of its merits and to detect its faults.

After an introductory essay upon the action of poisons, (in which he adopts the opinion of the best authorities—that they are usually absorbed, and act through the medium of the blood,) the author pro-

ceeds to the consideration of those diseases which he holds to be both contagious and infectious; namely, typhus, scarlatina, morbilli, variolæ, varicella, erysipelas, pertussis. In this list, however, there are more than one with regard to which it is by no means an acknowledged truth that they possess the characters in question.

First in the catalogue stands "Typhus," which, we are told, "is a continued febrile disorder having no intermissions: it runs a course of very varied length, and is both infectious and contagious." On reading this proposition, we supposed that Dr. Williams limited his application of the term typhus to certain forms of the continued fever of this country, which he regarded as unequivocally communicable from one person to another, and had this been the case we should not probably have made any remark upon it; but on turning the page, we find (p. 27) that "there is but one simple continued fever known in this country, and that is caused by the agency of the typhoid poison." Now these two positions taken together amount to this:—typhus is contagious, and there is no other fever in this country,—therefore all our fevers are contagious. This, we apprehend, is giving a universality to the principle, in which he will find very few disposed to agree with him: in fact, the doctrine seems to be assumed as an axiom, and all the illustrations adduced are intended to shew the manner and circumstances attending a pre-established fact, rather than to demonstrate the accuracy of the principle itself. So confident, indeed, is Dr. Williams in the existence of contagion as the only source of the disease, that he attributes it to this even after the interval of months from the date of exposure, rather than have recourse to any other origin. Thus, "a man slept with his father, nursed him, and lost him in typhus early in the spring of 1828. In the September following this person sickened with a most violent form of fever, and was only recovered with great difficulty. Now supposing this man to have imbibed the contagion from the only source to which he could trace it, five or six months must have elapsed from the time of his exposure to the cause till the appearance of the disease. The extreme periods, then, which the poison of typhus may lie latent, vary from a few hours to a few weeks, or perhaps a few months."

Although we have thought it proper to give the reader an idea of the extent to which Dr. Williams carries his notions on this head, as essential to a just view of his opinions, we are nevertheless far from having any intention of going into the discussion on contagion. We now proceed to the practical views of our author.

Having once affected the human body, the poison of typhus is described as "falling" sometimes upon one tissue, sometimes upon another, but more especially implicating the alimentary canal, the brain, and the lungs,—of the changes produced in which a very clear and satisfactory account is given. But even here there are some positions the accuracy of which we cannot admit: thus we are told that "it is a law that the typhoid fever does not wear itself out or die; that the patient does not become insensible to its action until it has produced the lowest state of depression consistent with human existence." Now the only idea we can attach to this is, that before a patient can recover from typhus fever, he must previously be reduced to a condition in which he is all but dead, so that the slightest imaginable increase of his depression would be fatal. But some patients pass through the fever with comparatively little debility, being scarcely confined to bed at all; while another is laid on his back for weeks, with a black tongue and a thready pulse. Are we, then, to admit that both these are equally brought to the lowest state of depression? this can scarcely be Dr. Williams' meaning, and yet if it be not, we really do not understand the expression.

The treatment is divided into curative, dietetic, and preventive. It has been attempted to arrest fever at once by cold affusion, and by the exhibition of emetics; but of neither expedient does our author entertain a favourable opinion. The assertion that "a poison circulating with the blood cannot be removed from the system by ablution of *its* (?) surface," conveys his estimate of the one; and with respect to the other, we are told that there seems but little ground for believing that emetics can, "under any circumstances," have the effect of stopping the disease.

Have we, then, any antidote to the poison? Bark is first discussed, and summarily dismissed, nor without sufficient reason, the mass of evidence against it being quite conclusive. Next comes

mercury, concerning which Dr. Williams expresses no more favourable opinion than this, that the evidence against it "is not so great as that against the use of bark;" but the argument on this part of the question is very inferior to that in which bark is discussed. We shall admit, however, that mercury is not a "specific" in continued fever, in order that we may arrive at the last and most novel part of the subject, namely, that in which the idea of cutting short the disease, or of finding any direct antidote, being abandoned, the author proceeds to inquire what is the best mode of treating this formidable disease?

The different authorities who have written for or against bleeding are adduced; and after a fair estimate of their statements, the conclusion is, that the evidence against bleeding outweighs that in its favour, so that, although this depletion may be occasionally useful, yet such cases constitute the exceptions, and not the rule. This brings us to the chief peculiarities in the views of our author, and which we subjoin in his own words.

"The positive rules of treatment are not to anticipate any thing in fever, but to await the occurrence of each particular symptom; and inflammation being set up, to remember that it bears a specific character, and that we might as well attempt to stop the small-pox eruption as to impede its course. All, therefore, we can effect prior to the inflammation, is to remove all those causes which may irritate, and consequently predispose any organ liable to be affected; or supposing the inflammation exists, to remain satisfied with so moderating its intensity, that the life of the patient may not de endangered by this particular affection; and beyond this, medicine has at present no power, except to stimulate those secretions which are in defect, and to restrain those which are in excess.

"The attempt to cure fever by antimony, ipecacuanha, or any of the many other of the large class of diaphoretics or purgatives, and where there is no particular indication to be met, is now considered to be a useless practice, or only calculated to amuse the mind of the patient. Let us therefore, looking to the rules that have been mentioned, suppose the fever to be established, and that the poison has, or is about to set up its great specific action on the mucous membrane of the intestinal canal; what is the mode of treatment to be adopted?

"As a general principle, there is no known symptom that marks the point at which disordered function of the mucous membrane of the intestinal canal ends, and alteration of its structure begins. It is necessary, therefore, in all cases in which the disease has existed but a few hours, to assume that inflammation of some portion of the alimentary canal does exist: an assumption which, though it may not actually be the fact, is true in forty-nine cases out of fifty. In this state of the disease, a large number of experiments has been made in St. Thomas's Hospital, to determine the most beneficial modes of treatment, and the following are the results of my experience.

"In a very large majority of cases diarrhœa is the only, or the principal symptom, when the alimentary canal is inflamed. The number of stools varies from three or four to eight or ten, or even to twenty, in the twenty-four hours. They are always loose, and may be indifferently green or yellow, ochre-coloured or black, and frequently contain large flakes of mucus, tinged with bile, and resembling moss-like vegetations. These stools do not furnish us with any accurate data, either as to the nature, the gravity, or the particular seat of the inflammation: for no difference has been observed in them, whether the inflammation be diffuse or follicular, or whether its seat be the colon, the cæcum, the small intestines, or the stomach. It will be evident, in such a state of things, that the exhibition of a series of doses of purgative medicines can only tend to keep up an irritation, which must greatly tend to aggravate the existing inflammation; so much so, that out of ten patients treated by purgatives by Andral, nine died. It is also certain, that even so mild a remedy as the hydragyrus c. cretâ has little power over the diarrhœa to assuage it, and perhaps none to change the character of the stools, and to render them more healthy, until the violence of the disease be past. The whole class of astringents seldom proves efficacious; opium affecting the brain, while kino, hœmatoxylum, and catechu, increase rather than soothe the inflammation. Neutral salts, which are not

purgative, as the acetate of potash, either in the state of effervescence or otherwise, are grateful to the patient, and, by tranquillizing the stomach, always give relief, and are so far beneficial; but in other respects they exercise a very trifling influence over the disease.

"Medicines, then, have little effect, either in controlling or subduing the inflammation of the intestinal canal in fever, or even in controlling the diarrhœa. It remained, therefore to try what effects an almost purely local treatment would produce, and whether, by means of soothing the intestine, we might not moderate the inflammation, and in this manner produce, both directly and indirectly, more sanatory effects. Many different plans have been tried to effect this object, but that which has been found the most successful is that of enemata, consisting of barley-water and of syrup of poppies. This plan has been tried during the last seven years in a large number of patients at St. Thomas's Hospital, and with, comparatively speaking, very favourable results. The mode of treatment is as follows:—

"Immediately on the admission of the patient, whatever may be the stage of the disease, ten grains or a scruple of rhubarb are exhibited. The object of this preliminary dose is thoroughly to empty the intestines; for notwithstanding the patient has been suffering greatly from diarrhœa, it has frequently been found, on posthumous examination, that the inflamed portion of the intestinal canal has so strongly contracted on some hard scybala, as to have retained them, and thus, contrary to all expectation, an irritating cause has existed in the intestines, which has mainly contributed to the fatal result. The bowels having been satisfactorily emptied, an enema, consisting of a pint of barley-water, together with half an ounce of syrup of poppies, has been directed to be given night and morning. This simple treatment has been continued till the patient is convalescent, and has been rarely complicated by the exhibition of any medicine whatever. Its success has been remarkable, compared with other modes of treatment, when the fever has been of any moderate degree of intensity; so much so, that in the years immediately before the cholera, out of sixty-three cases treated in this manner, only one died. The cholera was preceded and accompanied, and followed, by a fever of great severity, and of unusual fatality, and the treatment by enemata in those years has been by no means so successful, only one being saved out of four or five. But still it has been considered, on a comparison of the deaths and recoveries under other modes of treatment, that this by enemata was on the whole the most successful."

From gr. x. to ℈j. of rhubarb in the first place, and afterwards a clyster, consisting of barley-water, with ℥ss. of syrup of poppies, night and morning,—such, with "rare" exceptions, is the whole treatment of fever adopted by Dr. Williams. And here the thought is almost forced upon our minds, that the students at St. Thomas's, who a few years ago attended the joint lectures of Dr. Williams and Dr. Elliotton, must have been very singularly situated, and very thoroughly puzzled; for it is impossible to imagine any thing, even in the proverbial uncertainty of physic, more at variance than the *heroic* remedies of the one, and the *expectant* treatment of the other. But to return: the passage we have quoted above is a very remarkable one. We are told that, of 63 patients treated for typhus fever, in the manner above-described, only *one* died! This is a success almost or altogether unprecedented. Louis, Andral, and Chomel, gave 1 in 3 as the average number of deaths, and 1 in 4½ is about the least mortality described by any of them. In London, 1 in 12 has been the least mortality at the Fever Hospital, and on the great scale, it is more than 1 in 8. Seeing these results were so different from that obtained by Dr. Williams, we at first supposed that he had included in his list numerous slight febrile attacks, which scarcely run into fever, properly so called; but we found (page 79) that he makes an express distinction "between fever and those ephemeral febriculæ which simulate the first symptoms of typhus."

But again, while the usual mortality was so very small as to give only one death in 63 cases, yet in the epidemic fever which prevailed some years ago, when cholera visited this country, the

change was so great that three out of four, or four out of five, died! while it is implied, that where the practice above recommended was not adopted, the number of deaths was even greater. There is surely some typographical error in the passages we have quoted; for while we believe no other practitioner can boast so small a mortality in his cases of "typhus" as one in 63, so, few we believe, in the epidemic to which Dr. Williams refers, lost any thing like so many as he admits having done.

But our author, though employing enemata, as described, in the great majority of cases, points out, nevertheless, various circumstances which render them less useful, or even hurtful. Among the former is the seat of the inflammation being in the stomach or small intestines, instead of the cæcum or colon, or where the bowels are so irritable that the clysters are immediately rejected. Among the latter are those cases in which a considerable degree of meteorism is present, and also where there is hæmorrhage from the bowels. A few leeches, if much blood has not always been lost, are recommended; but, otherwise, the mineral acids, or supertartrate of potass, are to be preferred. Indeed, we may observe that the author is very chary in applying leeches: he says, "in applying leeches to the abdomen, much is at all times put to hazard."

When the head is affected, the following directions are given:—If the delirium be moderate, and unaccompanied by pain, it may be disregarded; but if the pain of the head be severe, and the conjunctiva injected, ten or twenty leeches are to be applied to the forehead and temples: if the pain be relieved, they are not to be repeated. In one form of head affection, though unaccompanied by pain, leeches are of use—namely, where the pulse is preternaturally slow, not exceeding 60, or it may be even 40, in the minute. Blisters are very "capricious," and not to be relied on. In cold applications Dr. Williams has so little faith, that he has nearly abandoned their use for several years.

When the lungs become implicated, the poison is regarded as having nearly exhausted itself. Local bleeding, by means of a few leeches or cupping, is generally sufficient to control the inflammation; but if not, a small venesection may be practised. Here mercury is admitted to be a useful adjuvant. A blister is also frequently of service, and it is recommended to dress it with a common linseed poultice. "In the cholera years," we are told that the affection of the lungs was among the earliest symptoms, and that depletion was exceedingly prejudicial, the most successful treatment having consisted in the exhibition of tonics from the commencement of the attack. Among the remedies of this class Dr. Williams particucularly mentions salicine, as possessing many "singular and valuable properties;" but he does not inform us what those are, farther than that it is pleasant and easily digested.

Under the head of preventive treatment, Dr. Williams remarks, that "after taking care of the patient, it is necessary to take care of ourselves,"—an observation, we need scarcely say, founded on the engrossing idea of the danger of infection, and which leads him to inquire into the different modes of averting this. The chlorides, he believes, possess no power beyond that of destroying smells. He places more confidence in an elevated temperature, and quotes the experiments of Dr. Henry,—experiments, however, we venture to say, which require to be repeated on a much larger scale, before any satisfactory inference can be drawn from them. But were it otherwise, the degree of heat required is inapplicable during the continuance of the treatment, and therefore we are left to the simple expedient of cleanliness, separation, and ventilation.

Such is a faithful and, we trust, sufficiently distinct, though necessarily very condensed, account of the views entertained by our author on the subject of fever. If his opinions should ever become generally adopted, they will constitute a new era in the treatment of that disease; but even without this, they will probably tend to render the interference of the practitioner less constant, and probably, therefore, less harassing than it usually is. There are, however, two sets of remedies frequently adopted in our hospitals in the treatment of fever, to which Dr. Williams does not, in our opinion, do justice: one is that of simple salines, and the other that of mild alterative mercurials. Of the former he says, they exercise "a very

trifling influence over the disease;" and of the latter remedy, that its entire abandonment "would in no case lessen the chances of the patient's recovery,"—an assertion which we do not find to be borne out by any evidence adduced.

Again, with respect to the enemata, there are one or two passages which appear to us to amount to contradictions in terms. Thus, speaking of the fever of the "cholera years," we are told at page 85, "But still it has been considered, on a comparison of the deaths and recoveries under other modes of treatment, that this, by enemata, was on the whole most successful." And again, at page 91, speaking of the same epidemic, it is remarked, "Some few of these cases recovered under the treatment of enemata; but the more successful mode was, in despite of the symptoms, a tonic treatment from the commencement of the disease." Now it is just possible that Dr. Williams may allude to different classes of cases; but if so, it is not sufficiently expressed in the context; and this leads us to observe, that there is frequently a looseness, not to say inaccuracy, of language, which much diminishes the force of his composition.

But farther: it is said of enemata at page 94, "it is a mode of treatment that is applicable *to every form of the disease*, and should be adopted in every case, only omitting the syrup of poppies when the bowels become constipated." But we had previously been told, at page 89, that it was not applicable "in every case: thus the cases in which enemata *are of no service* are those in which a considerable degree of meteorism is present." Nay, further: "when considerable hæmorrhage takes place from the bowels, the tepid warmth of the enemata *must of necessity be injurious*, and they ought consequently to be omitted." These passage cannot, we apprehend, be reconciled.

We shall probably take another opportunity of examining Dr. Williams's opinions on the other subjects of which he treats; meantime we recommend the volume to the perusal of those who, having seen some practice, are able to form a rational estimate of its merits, without being misled by its peculiarities.

MEDICAL GAZETTE.

Saturday, December 24, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE RADICAL UNIVERSITY.

THERE is, we believe, but one opinion among those not immediately connected with it, touching the merits of the new Board of Government Commissioners for the manufacture of Degrees,—namely, that it displays a most edifying illustration of the progress which has been made in the art and mystery of jobbing. This is the second "University" for which we have had to thank the same parties; and they have at least displayed some ingenuity in contriving another institution as unlike as was the first to those seminaries which have hitherto borne that respected name.

We object to the principles on which the new establishment is founded, and to the persons by whose instrumentality it is to be attempted to carry those principles into operation.

Universities, like most other public bodies, may ere now have had more or less of a political character, derived from the opinions of their members, and from the circumstances of the times; and no doubt statesmen have heretofore endeavoured, by various indirect means, to win their support or to neutralize their opposition. Oxford and Cambridge have thus had the reputation of being the one a Tory and the other a Whig establishment; but to whichever party they inclined, their bias was the result of opinion, and their's were the politics of free men. But, as Lord John Russell has informed us, the intellectual darkness of former times has given place to the bolder and more enlightened policy of

the present era. It was reserved for the nineteenth century to dash aside all ancient prejudices, and in the foundation of a RADICAL UNIVERSITY, openly to subjugate literature and science to the minister of the day. Every rule and regulation regarding courses of education, the examinations for degrees, the mode of granting the same, the selection of the schools to be attended, and, in fact, "touching all other matters whatsoever," must be submitted to, and receive the assent of, the Secretary for the Home Department, before they can be acted upon. The so-called "Senators" are mere tools in the hands of their masters in Downing-street; they have power to do nothing whatever of themselves,—no, not so much as to purchase red tape enough to tie up the orders transmitted to them.

An extraneous jurisdiction of this nature cannot but be highly injurious to the cause of learning: even the capacious mind of "one of our principal Secretaries of State" cannot grasp all the intricacies of science; and by the new duties imposed upon him by this charter, he must be exposed (a rare occurrence, doubtless, in the present day), tolegislate on matters of which he is profoundly ignorant. But, worse than this, the introduction of a discretionary power is always liable to favoritism and abuse; and the prospectus of the new University is very far from removing the apprehension of its being converted into an engine of oppression. The whole machinery is so dependent on the will of the administration, that politics cannot fail to become blended with every detail: new motives are thus called forth, and the streams of science become polluted by the agitations of party.

No jurisdiction or control over the studies of persons destined for learned professions should be conceded to any but those deeply versed in such subjects; and the ulterior reference to the Home Office we regard as the most arbitrary and tyrannical principle which in these days of political freedom it has been attempted to establish. Smith, in his Wealth of Nations, alluding to what had then only been witnessed in a foreign country, and referring in terms of prophetic indignation to the possibility of "some minister of state" at home being presumptuous enough to hazard a similar interference, observes, "the person subject to such jurisdiction is necessarily degraded by it, and instead of being one of the most respectable, is rendered one of the meanest and most contemptible persons in society. It is by powerful protection alone that he can effectually guard himself against the bad usage to which he is at all times exposed; and this protection he is most likely to gain, not by ability or diligence in his profession, but by obsequiousness to the will of his superior, and by being ready at all times to sacrifice to that will the rights, the interest, and the honour of the body of which he is a member."

The consideration which more immediately led to the construction of a new University by the present government, was obviously the desire to establish a power to counterbalance the influence of Oxford and Cambridge; the former of which was by far too conservative, and the latter not nearly radical enough to suit its purpose. The complaints made by the Dissenters of the disabilities they laboured under, gave a plausible pretext for interference, and the advantages of conciliating so large a body of men were sufficiently obvious in a political point of view. Let us therefore consider what those disabilities are of which the Dissenters complain, and from which they demand to be relieved.

The English universities deny them access to academic honours, and thus,

it is said, obstruct their advancement in professional life: not that the degrees which they are refused would necessarily afford them access to any of the learned professions, but that they are pre-requisites, without which the doors are at once closed against them. But the extent to which this ever was the case, has been greatly, and, we fear, designedly over-rated: at all events, as we shall presently show the extent to which it now exists is so slight as to constitute little more than an imaginary grievance; and certainly is such as to render the elaborate machinery which has been constructed for the ostensible purpose of removing it perfectly ridiculous.

The first degree is that in Arts; and it is one which, *per se*, is of no value, in reference to any profession which a a Dissenter can follow. Now, as we have said, in all the remonstrances on the part of the Dissenters, and in all the government measures connected with the subject, it is assumed that the preliminary distinction being denied, a barrier to their professional progress is placed at the very threshold. But the fact is, that, practically, the barrier is constantly overlept, and that without the slightest difficulty; after which the path is equally open to all. The only exception to this is in the Church, where, indeed, a degree in Arts from an English university is of value, as it affords a ground for the bishop on which to ordain the holder of it; but here it is obvious that even if he had the required diploma, no professional benefit could accrue from it to the Dissenter.

In the Law, no insuperable obstacle ever existed; and the only impediment was, that students from Oxford or Cambridge were called to the bar at the end of three years, while others, whether Dissenters or not, were only admitted at the end of five. Even this, however, has recently been discontinued, and no impediment whatever now exists, in the Inns of Court, to the Dissenter's free and undisputed passage, without any reference to his religious opinions.

In Medicine it was different; and those who have attended to the subject are aware, that here by far the strongest case existed; as was proved both by the evidence given before Mr. Warburton's Committee, and as was set forth in various petitions presented to both houses of Parliament. In fact, it is our deliberate opinion, that the only real grievance which could be established, was with reference to the medical profession. No one was admitted to be a Fellow of the College of Physicians save by special grace, and consequently no one could calculate on attaining the highest rank in his profession unless he had an English degree; and this, Dissenters, of course, could not obtain. It is not true that the College of Physicians ever refused to admit them as Licentiates, or threw any obstacle in the way of their practice; but we admit, and have often formerly complained, that the disability was, notwithstanding, of a very formidable and oppressive nature. We have said that we *complained* of the English graduate receiving of right what others only obtained by favour; but we do not continue to complain of that which does not continue to exist—we do not, like his Majesty's Ministers, employ our artillery to break down barriers which have already been freely thrown open. The English graduate no longer has any advantage in this respect over his dissenting neighbour—all are equally required to have passed through a prescribed course of study, but without any restriction as to where this may have been carried on,

—and all are equally admissible to examination for the diploma, with or without any previous University degree. By the new statutes of the College of Physicians, all are placed on precisely the same footing, without prejudice and without favour.

Now this important measure of medical reform had been for a considerable time in agitation, and its earlier enaetment was only delayed by the opposition of some physieians of the old school, since deceased. The fact of it having been finally aeeomplished early in the present year, was made known to Mr. Spring Rice long before he had organized the new institution which had been intrusted to his parentage; and we have no doubt that, if any communieation had been made to the College of Physicians, the whole affair might have been arranged to the satisfaction of all parties. But this does not appear to have been the object; that gentleman talked with individuals, but never communicated with the Body. Nothing would have been simpler than either to have conferred on the College of Physieians the privilege of giving the degree of M.D., under certain restrictions, or to have appointed a Board to aet in conjunction with them; by which all the rivalry and seandal which must now ensue would have been avoided.

But there was a political purpose to be served, and a *coup d'etât* put in execution, that the learned professions might, if possible, be brought under the control of the Minister, and that the Dissenters might reeeive at his hands the boon—though an inferior one—of degrees in physic which eonfer no right to praetiee! We beg leave to ask Lord John Russell what he is to do for his physieians when he has made them. Will he eandidly tell them that they may not praetiee on the strength of his diploma; or will the Secretary for the Home Department connive at the violation of the law? Here is the dilemma: without an act of Parliament, annulling that which already exists, the graduates of the new University must still come before the College of Physicians—or practise illegally. Now although individuals occasionally do this, it remains to be seen whether a Government will be bold enough openly and professedly to countenanee and protect an infringement of the statute. But if their graduates are obliged to appear before the College in Pall Mall, then what becomes of the University? — for besides this admission of its inferior authority, the degree is no passport to a license without the prescribed edueation having been gone through; and if this has been done, then no degree is required. In either case the diploma of the Radical University, so far as regards medieine will be useless; nor can this difficulty be got over in any other way than by proeuring an act of Parliament,—which, as the House of Peers is not yet extinguished, my Lord John knows, by experience, is more easily said than done.

When from the prineiples of the new institution we turn to the *men* by whom they are to be earried into effect, we find some names highly distinguished in general seience, whieh have most palpably been introdueed to float the dead weight of the medieal department. When we say of the physieians, that, with some exceptions, they are *respectable* * men, we use the most eomplimentary epithet which, without being ironieal, it is possible for any one to bestow upon them; but our limits will not allow us to enter at present on their individual and pro-

* As the same expression has been applied to them by a correspondent in the *Times*, we beg to say that we did not borrow the epithet of him, not having seen his letter till this was passing the press The coincidence tends to show the applicability of the term; but as to the rest, there is much in which we differ from M.D.—Ed. Gaz.

per merits. There is one point, however, to which we would briefly allude, because it has been brought before the public through the medium of two letters in the *Times*. It is implied, if not asserted, by the writers in question, that the government were fain to take what physicians and surgeons they did—because better men refused. This is true, but it is not the whole truth. Cooper, Brodie, Chambers, Holland, and others, were applied to, not, however, to construct,—but to concur; not to organize the medical portion of the new institution, (which, being all Whigs, it might be supposed they would have done on sufficiently liberal principles,) but by their rank and weight in the profession, to give influence and authority to plans previously laid down by others. They were asked to countenance principles of which they disapproved, and to become the colleagues of men already appointed, and with whom they thought it no honour to be associated. Therefore—and not from "being already connected with other Colleges," as has been asserted—did they, after repeated attempts at conciliation, decline the overtures which were made to them.

As it is, we trust that when the subject of this same charter comes before the House, and the proposal of placing all professional education under the control of the Minister is discussed, there will not be wanting some to repeat the words of Milton, addressed to the government on a somewhat similar occasion—"Truth and understanding are not such wares as to be monopolized and traded in by tickets, and statutes, and standards: we must not think to make a staple commodity of all the knowledge in the land, and to mark and license it like our broadcloth and our woolpacks *."

* Milton's Areopagitica.

CROWDING AT OPERATIONS.

We insert, in another part of the present number, some communications respecting the late disturbance at the operating theatre of St. Thomas's Hospital. As the case is to be tried at the Sessions, we abstain from making any remarks applicable to it in particular; but we take this opportunity of insisting upon the very great inconvenience which results from the admission of too many persons into the area of the operating theatres at our hospitals. It is quite obvious that half a dozen heads close to the patient, prevent ten times that number of persons, placed at a proper distance, from seeing at all; and it has long been a complaint among students generally, from whom we have often received letters upon the subject, that they are thus frequently prevented from getting even a glimpse of what is going on. At some of the hospitals, efforts have recently been made to abate this nuisance, and we earnestly hope that the present unfortunate occurrence will at least have the advantage of leading to a complete reformation. It is impossible to do justice to the great body of the students, to the patient, or the operating surgeon, unless the rule be rigidly adopted of excluding from the area every individual except the operator and the patient, and those immediately required for their assistance.

THE NEW PHARMACOPŒIA.

This long-looked-for volume has at length made its appearance. It is very different from its predecessor, being no mere reprint, but a complete remodelling; presenting a great number of new articles of materia medica, various new pharmaceutical processes, and a very extensive change of nomenclature. So much at the first glance; but it requires to be looked through carefully, and when we have done so, we shall say more about it: mean time we insert, at page 478, a list of the names which have been changed.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

MR. C. HUTCHISON *versus* DR. JAMES JOHNSON.

To the Editor of the Medical Gazette.

SIR,

I WAS informed by a friend, that last Saturday's Lancet contained the report of a speech made by Dr. James Johnson at the Royal Medical and Chirurgical Society, on the previous Tuesday evening, upon the occasion of a note of mine being read *.

The journal in question is now before me, and the speech, as reported, consists of five sentences, as follows:—"Dr. Johnson said he had passed a long time at sea, and doubted the fact broadly stated by Mr. Hutchison. He had seen many cases of calculus in seamen. Sailors were not operated on in the ships or naval hospitals during the wars, because seamen, when known to have calculus, were invalided, and sent to our civil hospitals, and there cut. He knew a naval surgeon who was twice cut for stone, and several naval officers who were affected with calculus. He did not consider seafaring men to be more exempt than others."

With regard to the first sentence, Dr. Johnson has a right to doubt what any man says; and though my opinions are supported by the most convincing official documents from all the civil sea-port hospitals in the United Kingdom, as well as those of the Royal Naval Hospitals, yet still, I say, he has a right to doubt.

I shall be extremely obliged to Dr. Johnson if he will have the kindness to point out the names of the hospitals and ships in which he has seen so many cases of calculus in seamen, for with such information I can test the correctness of his observations by a reference to the hospital and ships' books at the Admiralty.

The next sentence is so severe a libel on the naval hospital surgeons since the year 1800,—from which period my observations and calculations on the subject of calculous disorders commenced, and only about a year and a half after Dr. Johnson entered the naval service,—that I hardly know in what terms to designate the assertion. Will Dr. Johnson say that any man was ever invalided * from Deal Naval Hospital during the period of war, (when I was for several years surgeon to the institution), for the purpose of being sent to the Civil Hospital to undergo any operation whatever? There are now living, Dr. James Veitch, Mr. George Vance, Dr. Jait, Sir Stephen Hammick, and some others, I believe, who were surgeons of naval hospitals in war time, and whose very names I should think are sufficient warranty to disprove the assertion.

The naval hospital surgeon alluded to by Dr. Johnson as having been cut twice for stone, was Dr. Duke, whose case, and that of every other officer or man so operated upon which I could in any instance trace, are all mentioned and honestly recorded in my previous papers.

With regard to the Doctor's fifth and last sentence, the answer is, that as it is a mere unsupported assertion, opposed to the most authentic documents, it does not require any further refutation.

If I be not very much mistaken, naval hospital surgeons, and their brethren afloat, have been among the very first to lead the way in operative surgery, and to advance the science generally, instead of sending their patients to civil hospitals. But I rather suspect that my friend Dr. Johnson, when he went to the Society on the evening in question, had but just risen from perusing Smollett's Roderick Random, and so had gone back in his thoughts nearly a century.

The subjoined documents will speak for themselves; but I must add, that as truth has ever been my main object in this, as in every other professional inquiry and statement, I am sure that the profession and the public will not be satisfied without some explanation from Dr. Johnson, after so groundless an assertion.—Yours, &c.

A. COPLAND HUTCHISON.

10, Queen-Street, May-Fair,
Dec. 20, 1836.

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* On the Infrequency of Calculus among Seamen. See our preceding number, page 424.—ED. GAZ.

* No officer or man can be permitted to leave the service on account of ill health, until he have been surveyed by the medical officers of one of the Home Naval Hospitals, two captains, and two surgeons afloat: this is what is called invaliding.

LETTER FROM DR. BAIRD.

Clarges-Street, Dec. 20, 1836.

Sir,—I have received your note of yesterday's date, desiring to know if, during the period of my service in the navy, whether as physician of a fleet, a member of the Sick and Wounded Board, and subsequently Inspector of Naval Hospitals, I ever knew an instance of an hospital surgeon in our service invaliding a patient for the purpose of being sent to a Civil Hospital to undergo an operation for the stone.

In reply, I have to inform you that no instance of the kind occurred from the date of my appointment, in 1803, up to the period of my ceasing to perform public duty; and I have further to state, that if any instance had occurred betraying such incompeteney, I would have felt it an imperative duty to represent the ease to the Board of Admiralty.—I am, dear sir,

Very truly yours,
A. Baird.

Alex. Copland Hutchison, Esq.

LETTER FROM SIR WILLIAM BURNETT.

Admiralty, Dec. 19, 1836.

Sir,—In reply to your note of this date, requesting to be informed whether I have ever known or heard of any naval hospital surgeon who invalided patients requiring operations of any kind, for the purpose of their being operated upon in civil hospitals,—I can have no hesitation in saying, that I never heard of, or was acquainted with, any such occurrence.

With respect to your second question, I naturally conclude that if such a thing had happened, the surgeon doing so would have been considered unfit for his situation; and I can only add, as respects the present time, that I should feel no hesitation in immediately recommending the removal of such a person from the office of surgeon of any of our hospitals.

I am, sir,
Your humble servant,
W. Burnett,
Physician-General.

Mr. Alex. Copland Hutchison,
Surgeon, R.N.

CASE OF LITHOTOMY.

NOTE FROM MR. HILL.

To the Editor of the Medical Gazette.

Sir,

In your last Gazette you mention a case of lithotomy sent by me to the Royal Medical and Chirurgical Society, in which you have omitted the only circumstance which appeared to justify me in occupying the time of the Society,—I mean the total insensibility of the nervous system, with the entire loss of power of the sphincters of the rectum and bladder, produced by moving the calculus from its situation at the entrance of the bladder, some time before the operation was performed. The symptoms after the operation were, indeed, very severe and unusual, but not sufficiently so in themselves to be related to the Royal Medical and Chirurgical Society.—I am, sir,

Your obedient servant,
Wm. Hill.

Wotton-under-Edge,
Dec. 20, 1836.

[We regret that there should have been any omission, but are not accountable for the abstract of his paper referred to by Mr. Hill. It was furnished to us officially from the Royal Medical and Chirurgical Society.—Ed. Gaz.]

AN ADDRESS

FROM

THE FOUNDER OF THE SELF-SUPPORTING DISPENSARIES.

To the Members of the British Medical Association.

Gentlemen,

Every medical man in the kingdom will sincerely rejoice, who has heard that an Association is formed in the metropolis for the laudable purpose of increasing the usefulness, and upholding the respectability, of the profession.

And although, as I am informed, at your first meeting, the plan I have for nearly twenty years been endeavouring to carry into effect was reprobated as detrimental and pernicious to your interests, I have no doubt, even if my informant is correct, that when the Association is disabused of the prejudices that have been absurdly created against Self-supporting Dispensaries, many amongst you will bring honest minds to the investigation (which is all that the scheme requires), and will be able to appreciate the difficulties that have been surmounted, the interests reconciled, the untiring spirit shewn, and the practical good effected by the projector. During the whole of my professional life I have sacrificed my own interests to my proposed scheme of improving the medical profession, by effecting a "radical reform in its position towards the working

people of the country." Through good report and evil report I have persevered; and I can but smile at, although I regret, the misrepresentations which have already been current amongst you. I have gratefully discovered that there are a few in your great town that may be made useful allies in resisting the unjust warfare that has been carried on against the medical profession.

These acts of insult and oppression are of the same character, whether under the new Poor-law Amendment Act, or the darker doings of overseers in irresponsible vestries.

It is the dealing in human life on the principle of *contract*, that is the evil; and no amount or mode of fixed salary can make it endurable to Christians.

The lovers of their neighbours will not be satisfied till every poor person, and every pauper, can choose for himself his own medical attendant.

But the authorities—whether commissioners, guardians, or overseers—whether the abettors of, or even dealers in quackery—are only external causes of injury and degradation to medicine as a science.

The internal are the most injurious,—that host of illegitimates, who, paid for exercising one-part skill and three-parts trade, find it difficult to take up a higher station. The craft is their status, and they are naturally prone to mystify and misrepresent every attempt to liberate their dens of drugs, dregs, and darkness, from the thick clay with which they are covered.

We have, indeed, another internal enemy—to which I will not at present particularly allude, as I am unwilling to open a wider field for discussion in my first letter than necessary—but which the "British" and "Provincial" will unite in abating as a common nuisance, as soon as they are sufficiently organized to give weight to their growing powers, and improving influences.

Our noble art, by means of its united brethren, of which the "Provincial" is the first-born, is destined to establish, through the best affections of mankind, lessons of the truest wisdom.

The science which in practical usefulness excels all others, must no longer be separated from that benevolence in the body politic, which can best make it valuable.

Schools and mechanics' institutions have extended the dominion of knowledge; "self-supporting dispensaries," "medical associations," and an elective "medical board," are now required to extend the dominion of real charity.

Beggar making, like pauper making, is an offspring of mammon, and not of charity. Let us, who know more of the nature of man than guardians, masters, or legislators, teach the world a useful lesson.

I am thankful, (as Dr. Webster, your chairman, stated,) that I have been so instrumental in bringing you together; rest assured, gentlemen, that no future efforts on my part shall be wanting to keep you at your posts, and stimulate you to increased exertions. It is a noble cause; and if we pursue a straight-forward and favourable course, all the world will be with us; do not despair. The same foreseeing and quiet faculty of combination that has so moulded events as to cause your assemblage, can direct your movements as may best suit its own purposes; travel with me, and the good is accomplished; resist me, and the glory of success will be altogether my own.

I find by the published Report, that on the cloth being withdrawn, Dr. Webster, in a speech which appears to me full of good humour and good sense, drank the toast of the evening, "Prosperity and unanimity to the general practitioners of medicine throughout the universe." Amen, and amen, is responded from land's end to land's end.

When I admit that your chairman's speech was full of good sense, you must permit me to change one word of it only, for without that change, as you yourselves shall decide, it was a sort of kaleidoscope of sentiments without object or meaning.

The chairman is reported to have said, "I wish now to mention what I consider in medical language to be the proximate causes of the meeting. I will not conceal from view the recent and still continued attempts to inflict on the profession a host of evils in the shape of 'Self-supporting Dispensaries.'" I am convinced that the Doctor must have meant to say *cure*, instead of *inflict*. Every paragraph he utters afterwards confirms this amended reading. "It is not the object of these societies (or institutions) to institute a monopoly; they are intended to promote fair and honourable (competition between institutions) conduct among the the practitioners at large towards each other; to encourage among them (in each concentrated locality) the exercise of harmony and good will; to diffuse medical information; to insist upon the rights vested in its members by the law of the land; to suppress illegal practitioners, and thereby protect the real interests of the public, &c.; in few words, to render the profession within the sphere prescribed, honourable, useful, and respectable."

These, gentlemen, are the sentiments I have so often for eighteen years reiterated as the probable fruit of Self-supporting Dispensaries, when comparatively disregarded and unknown, that I cannot but hear them quoted in the manifesto of the British Association, with feelings of complacency and good will, that is undisturbed, though my health, and success to my views, was not the distinguishing toast of the evening.

I must copy a few more observations from the chairman's address: he is very wrathful with the Commissioners, and the Penny Clubs. Before I repeat his remarks on this head, I should like to be told what have "Poor-law Commissioners" to do with affairs that do not belong to them. The Foreign Office would be as much in place, giving directions on the parish constabulary, as the Poor-law Commissioners have been in their interfering in this matter at all. Dr. Webster says, "I shall not shrink from declaring what I feel to be the truth, that nothing has occurred for a century past which has so much tended to degrade and lower general practitioners, not only in the eyes of the public, but our own eyes also, as the introduction of these Penny Clubs." I must here silence the "cheering and immense applause" that followed, by observing, that there have been other causes much worse than Penny Clubs—"farming the sick poor of parishes," and submitting to have (Oh, for the moral cowardice of London practitioners!) reports of medical proceedings inserted in the *Lancet*. These are standing libels on the profession, which have vilified and degraded it beyond all others combined.

But to return. "We are to be put up to Dutch auction—not to the highest, but the lowest bidder; we are to be pitted, the man of little experience against him of the most extensive observation, and to be forced to perform the anxious and laborious duties of our profession for an utterly contemptible pittance."

This is perfectly true. I have enlarged on the same facts for the last twenty years, and Lord John Russell presented a petition for me to the House of Commons, on the same subject, in 1826.

I have also endeavoured to remedy the evil by suggesting a judicious system of "co-operation" amongst medical men themselves, and not the "competition" which the Penny Clubs establish and perpetuate. I hope, for the sake of consistency, that none of the gentlemen who cheered the chairman's observations on the Penny Clubs, or four shillings and fourpence annual payment, were surgeons to clubs allowing them considerably less per annum for each person?

I am not friendly to Penny Clubs—but that I foresee they must merge in Dispensaries. But to return to the chairman. He says, "Need I mention another grievance—that of quackery? This is an evil which truly preys upon the vitals of the public, and weighs down our profession, spreading over the land and assuming innumerable shapes.

"Another, and one of the greatest evils from which our body suffers, is the existence of what may be called prescribing or dispensing chemists; men who, without a particle of medical or scientific knowledge, are becoming the general practitioners in all minor ailments," &c.

They are decreasing, Dr. Webster, in all those places where there is a "Self-supporting Dispensary" established.

"I know of no country where our system of unlicensed practice exists, and I am satisfied, that, if we act with unanimity, it cannot continue in this country. Let the duties of chemists be properly regulated, and not be allowed to interfere with those of the regular practitioners."

"Another evil,"—I entreat attention to this last extract, because Self-supporting Dispensaries progressively secure the only remedy—that is, a payment for time and skill, instead of drugs:—

"Another evil is the mode of paying general practitioners; a mode which unfortunately leads to unjust suspicions of his integrity, and is often very galling to an honourable-minded man."

The following letter from a gentleman who is a stranger to me, so admirably illustrates the practical good sense of the chairman's speech, that I must trespass on your patience for its insertion. It proves that Penny Clubs, or "Self supporting Dispensaries," are the only cure for the host of evils of which he complains. It is so satisfactory, that I expect to have, on some early occasion, your countenance, favour, and even personal protection, when I shall next visit town, in the hope of establishing "Self-supporting Dispensaries" through the length and breadth of the land.

A scheme for this purpose I intend shortly to submit, through the pages of the MEDICAL GAZETTE, to the members of the "British" and "Provincial Medical Association;" as I learn there are not a few who are sufficiently philanthropic and patriotic to take up the matter in good earnest.

In the course of time, from them a "Medical Board" must be elected, for regulating and bringing into order and sys-

tem our present chaos of medical economy. The outline of that scheme shall be the subject of my next communication.

I have the honour to remain, gentlemen,
Your obedient servant,
HENRY LILLEY SMITH.

Southam, Dec. 4, 1836.

P.S. There is a letter in the Lancet, to your Association, signed H. S.: be pleased to observe, I am not the author.

The following letter is from a gentleman, who is personally unknown to me, and of whom I made some inquiries, which will be perfectly understood by the answers.

Dear Sir,—I have much pleasure in replying to your letter respecting our medical institution, and have given it my best attention, in hopes of being able to answer your several queries satisfactorily: at the same time allow me to say, it was based upon the principles you have so fully laid down.

With respect to your first query, I really think that not more than one in ten of the free members have been accustomed to seek medical advice on their own responsibility; and of that number, perhaps one-fourth made no payment whatever; the others after an indefinite period of from six months to four or five years.

That the sale of quack medicines is lessened, I have not the least doubt, since the establishment of our institution; but this must, of course, depend in a great measure on the attention which the medical men are disposed to pay to such complaints as those medicines are generally sought for. The opportunity the members have, also, of changing their medical attendant after a given time, should they not experience the relief which they had anticipated, will, I think, do much to lessen that evil.

An institution of this description necessarily brings medical men into each others' society, to suggest ideas for the good of all, as well as for the well-working of the institution itself. This naturally tends to engender a better feeling; and I am convinced that the little jealousies which arise, and which are perhaps increased to ill will, more frequently takes place from a want of knowing each other than from any other cause; and I have no hesitation in saying, that a much better feeling does exist in this town among the medical men than before the formation of the institution.

I have just seen the rate of payments proposed to be adopted by the institution at Stratford. I very much fear they are too high, particularly for an agricultural district. I think they should not be much, if anything, higher than ours are, otherwise many of the most deserving of the labourers will not be able to avail themselves of it, particularly those with large families; but if the payments are kept to our limits, the numbers will make up for the smallness of the sum. I am sure ours would never have reached half the number it does at present, with such a scale. That medical men, in general, will not expect that an institution of this kind is to remunerate in the manner they ought to be remunerated, I am well convinced; but it will do more than they will be at first disposed to admit; and where is the man in practice who is not always working without even the shadow of remuneration. This should not be forgotten, nor the pleasure of doing so much good on such a sure foundation, independent of what ought to be our first motive—that of having the approbation of the Supreme Being for such good intentions. It is also desirable to keep within a certain distance of the town, if possible five miles, otherwise the labour is too great, particularly if the general confidence is not very equally balanced between the parties.

Should you think these observations can be of any service, you are at perfect liberty to make use of them in any way you may think best.

Allow me to subscribe myself,
Yours, &c. &c.
THOMAS TAYLOR.

Cricklade, Aug. 30, 1836.

REMARKS
ON THE
PRESENT STATE OF THE IRISH MEDICAL CHARITIES;
PARTICULARLY IN THE SOUTHERN PROVINCES.

To the Editor of the Medical Gazette.

SIR,

IN my former letter I presented to the readers of your excellent journal an account of the position which the professional men who preside over our medical charities occupy, with respect to the applicants for relief. I dealt (but mercifully) with their varied pursuits, and gave a brief sketch of the insufficiency and inefficacy of that professional assistance which the poor must avail themselves of, and at so considerable an expense. Well and truly might I exclaim (to which exclama-

tion I am confident every rational and thinking member of society will respond), "Charity, O charity! many, gross, and glaring, are the abuses which exist, and publicly injurious are the delinquencies which are perpetrated, under thy hallowed name!" Paradoxical as it may appear, I could, without fear of contradiction, declare the Irish Dispensaries, under existing regulations, a disgrace to any civilized community, and a convincing proof that, by artful and designing persons, who have the unblushing hardihood to advance charity as their watchword, the design of those institutions may be so metamorphosed as to become a burlesque on common sense. However, it would not display much profundity of wisdom to soliloquize over the degraded state of establishments which never enjoyed an exalted position, or to regret the mean and lowly estimate of professional character of gentlemen who appear so perfectly indifferent about their reputation: would it not be more philosophical to endeavour if possible to effect the rescue of the Irish medical charities from their original and present chaotic state, and remodel the mode of getting up such institutions, by establishing a system that would abolish many abuses in their very formation, and disarm them of those powers which in their subsequent vicious government are pregnant with so great a mass of misery? Much of the manœuvring and finesse practised in the getting up of dispensaries, is already known to your numerous readers; even so, I cannot permit this opportunity to pass without recording as an exemplification a case from real life. A son, a son-in-law, or a brother, after a preparatory medical education, incapable of securing an independence by an honourable competition with his professional brethren, beneath the scrutiny of a discerning public, becomes an incumbrance, each individual to his respective family; the aggrieved party, smarting under so great an annoyance, or the aggrieving feeling his situation rather irksome, mutually coalesce in endeavouring to secure some provision which will place the dependant beyond the reach of public patronage; the necessity for a local Dispensary in some district is immediately suggested —a necessity which never had an existence but in the inventive imaginations of the parties reciprocally anxious to get rid of what each conceives an evil, the interests of the poor being set forth as a mere subterfuge to justify so outrageous, so barefaced, a proceeding before a few gentlemen, who never deign to cast away a thought on the subject, being already fully convinced from repeated examples, that benevolent intentions towards the afflicted form the least item in the proceeding, being viewed as a matter of no consideration whatever, when brought in competition with the interests of the medical practitioner. If direct interest cannot be commanded, which is seldom the case, it is solicited indirectly; in either instance, the support and patronage of a few influential persons (be they of high or low degree) in the locality are procured: under this sanction, a business previously decided on is easily arranged, a few subscribers enrolled, many of them nominally, and just enough to vindicate their soliciting a presentment from the grand jury. Having so far prosperously progressed, the day for the nomination and appointment of a medical attendant to the charity is advertised; a something farcical, in common parlance called an election, is gone through, and the zealous candidate for dispensary honours is, in accordance with preconcerted measures, duly elected. Should an anxious desire to anticipate the possession of the proffered prize induce a meritorious candidate to endeavour to divide the interest, and advance his claim to the eleemosynary sinecure established by a party; under such circumstances, to provide against the event of success being doubtful, a ruse is practised; a number of frieze-coated electors, levied for the occasion, are brought to the poll, previously supplied with a guinea each by the friends of the opponent; furnished with money, and armed with their shillelahs—the usual emblems of their prowess—they are quite indifferent as to whether they are to annihilate the pretensions or the existence of the rival aspirant; and if a choice were afforded, my unbiassed opinion is, the predilection for the latter would decidedly predominate. After so meritorious and successful a manœuvre, a separation of the frieze-clad reserve could not take place without the celebration with more than ordinary hilarity of so great an achievement, and a scene that at this stage of the proceeding ended in violation of their taste and ideas, without a general rencontre, could not be allowed to pass away without an adjournment to some neighbouring pot-house, where they regale themselves with a long and deep drink to his honour or his reverence (being both used as synonymous appellatives) to commemorate the important triumph; and before the spirit should evaporate they consider the present a most convenient opportunity to arrange some ancient and hereditary disputes between the members of rival clans, when after numerous hostile demonstrations and consequent parlies, a general action eventually ensues, ending as usual,

in the extensive laceration of scalps, a wanton demolition of teeth, and after sundry other injuries are inflicted, a truce is agreed on, and they withdraw from the field of action; thus speedily affording a convenient opportunity for a practical display of the skill of the newly installed dispensary tyro; a demoralizing exhibition on the first establishing a medical charity, and an ominous introduction to so important a functionary. Many memorable instances of the success of this manœuvre have occurred: on a late occasion, when a dispensary was being established for the especial provision of a young friend, another candidate started, was very unsuccessful in his canvas, a sweeping majority being against him: the case was an extreme one in the most literal acceptation; a friend stepped forward, supplied the necessary funds, and a number of electors created for the occasion, who never subscribed afterwards, presented themselves unexpectedly, and voted in the opposition candidate, much to the annoyance and discomfiture of the gentleman for whose accommodation the medical charity was being founded. Such subscriptions cease after the first year. Many of the subscribers, disgusted with the operations of the charity, withdraw; some continue, fancying it the cheaper way to have their domestics, horses, and dogs, physicked: others, through a more charitable motive, labouring under the delusion of rendering through the institution some relief and comfort to invalided paupers, but negligent unconcernedness being the estate of all, the professional gourmand is allowed to devour both subscriptions and grand jury grant, giving the hapless poor out of the capture, under the semblance of doing something, a little treacle or vinegar, a solution of Glauber salt, or some rancid castor oil; it being a matter of no consequence to the suffering community, if in addition he devoured those also as condiments to the mammon. However, these good things have had their day; abuses, gross abuses, may grow and flourish luxuriantly for a season, until they savour too powerfully of the rankness of that soil in which they vegetate: establishments may be so metamorphosed into engines of destruction, that their very existence becomes a harlequinade on public decency. Could, I would ask, such a state of medical institutions or medical science be credited, were it not advanced on indisputable authority?—could it be conceived that the lives of the applicants in extensive districts are trifled with by the administration of a little treacle as a universal panacea, and that large sums are advanced by subscribers, and from the county treasury, to support so outrageous a humbug and imposition? But the mortifying truth is too apparent, that such abuses at present exist. St. John Long was held up to public censure, prosecuted, and punished; Morison's disciples are undergoing similar odium, are criminally sued, and forced to suffer penal retribution, each and all most deservedly; and in some corner of neglected Ireland, with her many advantages—as it were, under the rose—we daily witness treatment less founded in reason, and much more preposterous, than that practised by those redoubted charlatans—treatment pursued by gentlemen who are in some measure provided for by the law of the land, and who are bold enough to declare, that the whole of medical and surgical literature may be comprised in a volume equal in size to a diamond edition of Lord Byron's Childe Harold.

Prospects in the dim vista are at last commencing to brighten, if we are justified in indulging so pleasing an anticipation from a ray of reform which has just beamed upon us in the shape of a clause in a late legislative enactment; at least the spirit which it has evinced clearly proves that the Irish medical charities are not altogether overlooked or forgotten, but that some of their malpractices are known in higher quarters, and duly estimated. It is not to be expected that the readers of your able journal can be acquainted with acts of Parliament directed to advance the interests of Ireland. I take the liberty, then, of directing their attention to the Irish Grand Jury Act, which was passed into a law during the last session, and which, in its 81st clause, provides, "That no presentment can be made for any dispensary, in case it shall appear that the salary of the medical attendant during the last year amounted to one-half of the sum which the subscriptions, donations, and the sums presented for, would amount to." If every measure that is introduced savouring of novelty, and every innovation on accustomed usages, however salutary, will meet with opposition as a necessary consequence, how much more strenuous must the resistance be, when the pockets of those defaulters against whom this shaft is aimed are trespassed on. As might be expected, this very wholesome measure, on its introduction to this country, created a great sensation amongst the physicians and surgeons of dispensaries. The legislators and the government were denounced, and appearances are wearing a formidable aspect. Trifling incidents have often given rise to serious results, which the British government, from dearly-purchased experience,

must be fully convinced of; and the abettors of disorder have laid it down as an established rule, to raise an outcry against every enactment that interferes with their views. The grievance, as they have been pleased to call it, has been long and warmly dwelt on. The tocsin of alarm was immediately sounded, by a body whom I fear I must bring under observation, as being the originators of the hue and cry, however willing to permit them to repose in their accustomed obscurity.

A medical club, under the specious appellation of the Western Medical Society, was brought into existence,—I cannot be particular as to the exact day, not being at its accouchment; and as an application to its venerable sire might awaken unhappy reminiscences, as the offspring is occasionally looked on rather unworthily by the parent, more especially when expectations are grievously disappointed, and no credit whatever can attach itself to the progeny; and as an application to its godfather, the jovial secretary, to learn the exact day of the month, or week, or hour, might be attended with tedious delay, as he may not be very communicative under existing circumstances, and would view the inquiry with suspicion,—it is sufficient for my present purpose that such a club has been established these seven years for the purpose of indulging in and enjoying the festivities of the season, and banqueting together on appointed days. But a most unprecedented and unaccountable transmigration has taken place; it has actually bounced from its infancy to its dotage, without going through the usual developmental processes or gradations incident to life, or even deigning to pass through the climacterics between these two extremes of animal existence. Extraordinary as it may appear, I can positively vouch for the authenticity of the fact, leaving the explanation of this (to me) unparalleled violation of the laws of nature, to the sagacity of some more profound physiologist. I can only throw out, as mere speculative suggestions, the effects the late dampness of our climate is said to produce on the constitutions of many, and the influence the planetary system is said to exercise over sublunary mortals, however loaded with hoary honours. And in this unenvied state of premature decay and mental imbecility have those anti-Apollonists set up Bacchus as their tutelary deity; and during one of their sacrificial orgies to this divinity, drivelled forth a requisition, announcing the necessity for convening a public meeting, in accordance with a requisition published in the daily papers. A number of the medical attendants of dispensaries, alive to their own pecuniary interests, assembled, each individual vieing with his brother practitioner in ardent desire to inflict summary vengeance on the presumptuous intruders on their vested rights.

After the usual preliminaries were gone through, an endeavour was made to depict the extremity of their distress; but their sporting was of that order that the reporter, through compassionate feeling for the members of a learned profession, from whom something chaste, if not very eloquent, should be expected, refrained from publishing their ridiculous rhodomontades. Four resolutions were proposed, and formally seconded. The first expressive of the injustice of the concluding proviso of the 81st clause of the New Grand Jury Bill for Ireland, which proviso I have before alluded to. The second embodies the vague and defective state of the laws hitherto passed for the regulation of the medical charities in Ireland; that the claims of the objects of charity have not been sufficiently protected; and that the adoption of such measures as may tend to the establishment of a system more adequate to the alleviation of the wants and miseries of the destitute poor, is most imperatively called for. The third maintains that a fair and competent remuneration is a simple, just, and natural right, and as such it is claimed in common with the other liberal professions in this country. The fourth demands the attention of the profession at large, in the strongest manner possible, to the absolute necessity of union, firmness, and active co-operation. The term injustice, in the first resolution, flows with an unbecoming grace from the lips of gentlemen, for a history of whose injustice in the discharge of the most momentous duties, I have only to refer to the reports of the assistant medical commissioners, and delinquency actually coupled with injustice; when we call to mind that the performance of those duties was left to their honour, and the dictates of their consciences, commodities so exceedingly elastic on this occasion, as in some other cases, that they can be stretched with the most placid composure and self-satisfaction, to any desired extent. As to the second resolution, fortunate would it have been for the public at large, and more especially for the distressed applicants at the Irish Medical Charities, had laws long since existed sufficiently strict to have enforced the observance of obligations which were never sincerely entered upon, and have been so grossly violated in most instances; laws which would have rendered imperative the protection of the objects of charity, whose interests from the first foundation of these institutions, have been considered of a mere secondary nature. It is sufficiently evident that no

system, however valuable, can tend to the alleviation of the wants and miseries of the poor, whose direction and chief government are left to the option and caprice of persons who view their dispensary duties as a mere formal routine to save appearances, and as drawbacks on their ordinary amusements. The third resolution clearly evinces the spirit and feelings which dictated the whole procedure, a dread, in fact, of the privation of emoluments which they are enjoying at the expense of the destitute and afflicted, without discharging a single obligation, and displays the resistance to any measure, however salutary, which will be offered, should it interfere with their depositing the whole proceeds of the institution in their own exchequer. In the fourth we have an appeal to the feelings of the profession; an endeavour to enlist in their cause, union, firmness, and active co-operation; these are expressions very familiarly used, and well understood in this country to mean firm, active, and co-operative combination—an evil, misguided spirit, which too freely opposes itself to all legalised measures, and has introdueed some of its most devoted partizans to very exalted, but not very honourable, elevations. A committee was formed of dispensary superintendents, and from this troubled estuary will flow the muddy inundations which threaten to deluge the Lords and Commons. On the whole, we have in this delightful morceau from the physicians and surgeons of dispensaries, an acknowledgment of error, imperfection, want of legal measures to enforce obedience, and avaricious acquisitiveness, which could not proceed from the united wisdom of any similar meeting in the universe. A letter was read from Lord Morpeth, in reply to some communication stating that the clause was introduced at the instance of Irish members of all parties. But, as if consistency was doomed never to be a virtue inherent in the bosom of an Irish senator, disclaimers to this accusation were sent by three absent members of parliament, who threw the whole onus on the House of Lords. One member condescended to attend the meeting, who, in the enjoyment of his ambitious elevation, was complaisant enough to plume himself on belonging to the medical profession, and promised, as a pacificator, to introduce a bill immediately on the meeting of parliament, to get this clause repealed, to which they (indulging in a witticism) have applied the soubriquet "obnoxious." To be inducted a member of parliament in this distracted country, the political adventurer, in order to lay claim to public patronage and individual suffrage, has only to embark as a public brawler, make speeches about community of rights, agrarian division, and the propriety of an equal distribution of property, proving that as we are all born alike, no one had a right to have more property than his neighbour. Such being his laxity of principle, it is only equalled by his inattention to the duties imposed on him, and his faithlessness to the interests of his constituents. That such a member can have the effrontery to demand the abolition of a clause likely to introduce a salutary improvement, I feel satisfied, and even advocate the welfare and utility of the Irish medical charities under their present professional and fiscal arrangements, in the face of the adverse reports published by the assistant medical commissioners. It can scarcely appear credible that any government will, after enacting a measure, and with sufficient reason, render itself a puppet in the hands, and repeal their edict at the suggestion of, a partial body, without affording time to witness its operation. Nothing could, in my opinion, tend more powerfully to establish against themselves the charge of hasty legislation, incapacity, and inconsistency. What reasonable allegation can they advance in justification of the demand? From all the information which has been acquired at so great a labour and expense, and from written documents, it appears irrevocably established, that the Irish dispensaries do not, neither are they calculated, to advance scientific research. They are of no public utility; they are not meritorious appendages to any official functionaries; and as at present constituted, can in justice claim nothing from the government but a most sweeping and intrinsic reform: in reality, every party anxious to disown a collusion with abuses, must feel desirous to have such incumbrances erased. Even in the department of forensic medicine they seem totally inoperative.

It has been my desire to avoid encroaching unnecessarily on the pages of your very valuable journal. I shall, as briefly as possible, communicate a case, selected from numerous instances, to support the position of their inutility in the province of forensie medicine, which I have just advanced. A person received some injuries from the brutal usage of another individual, for the alleviation of which, after the customary preliminary visit of the medical superintendant of the charity to the applicant's house, he was admitted as an intern hospital patient, and treated according to the routine of the establishment. The matter afterwards became the subject of legal proceedings, and on the trial the surgeon of the hospital was called to give evidence as to the nature of the injuries, the effects that re-

sulted from them, with other information likely to throw light on the case: the nature of the injuries could not be elicited, nor could the results be ascertained from his examination: all appeared wrapped in the most profound mystery: he prevaricated, and the assistant barrister who presided, animadverted sharply and indignantly on the professional evidence, and expressed considerable surprise at its utter inability to assist in forwarding the investigation of what to all appeared a very plain and simple case. Some other strange medical features which presented themselves during the examination, induced an inquiry into the treatment adopted, when after the detail of some exceedingly frivolous measures, it appeared the remedy on which chief reliance was placed, and that remedy considered of most vital importance, was the suspension of a blistering plaster at the head of the patient's bed, as a scare-devil to frighten away disease which could not be comprehended. The whole scene drew forth the censure of court and jury; so shameful an exposure of practice, which never had a precedent, powerfully impressed the hearers with a painful conviction that the practice of medical men was a tissue of perfect humbug; and thus was odium drawn not only on the gentleman who flourished so despicably before a court and jury, but on the profession at large. We have heard of charms and amulets, spells or incantations, in short, of every description of humbug and quackery, likely to please the fancies, and operate on the credulity of the public, but this treatment in an hospital in the nineteenth century, with ample funds to advance its interests in every department, surpasses all.

HIBERNUS.

Nov. 14, 1836.

DISTURBANCE AT ST. THOMAS'S HOSPITAL.

MEETING OF GUY'S STUDENTS.

*(From a Correspondent *.)*

ON Monday evening last a meeting of the students of Guy's Hospital was held, at the Three Tuns Tavern, Borough, for the purpose of taking into consideration the circumstances connected with the disturbance that took place at the operating theatre of St. Thomas's Hospital, on Friday the 16th, and of adopting such measures as should seem necessary to vindicate themselves and friends from the charges brought against their conduct on that occasion. About 150 students were present. Mr. Blackburn was called to the chair.

The Chairman explained the object of the meeting, and urged the importance of proceeding steadily, and with good temper, to business. He recommended, also, that time should not be lost; and in order to set an example of needful dispatch, called on Mr. Tweedie to bring forward the first resolution.

Mr. Tweedie complained in severe terms of the conduct of the door-keepers and others at St. Thomas's. On Friday last two operations for lithotomy were to have been performed at that hospital, and a large concourse of students were collecting to witness them. Several gentlemen from Guy's, in accordance with their usual custom, presented themselves for admission: and having upon former occasions sustained inconvenience from the incivility of the porters, took care to be provided with their cards of admission. Two of the dressers from Guy's were proceeding to their proper seats, having shewn their tickets, when they were rudely assaulted by two menials stationed within the theatre. This sort of treatment being resisted, a disturbance took place. The students at the outer door, imagining that personal violence was being inflicted on their friends within, burst open the door, and rushed to their rescue. Such was the ground for an unjust charge of assault which had been brought against the two gentlemen already mentioned; and a third, who was not in the hospital at the time, was summoned for breaking down the door. No difficulty, however, would be found in rebutting the charge, and demonstrating that the whole disturbance originated in the conduct of those who had now the audacity to add false accusations to their gross violence. Mr. Tweedie concluded by moving—

"That the students of Guy's Hospital having understood that certain charges, arising out of the recent disturbance in the operating theatre of St. Thomas's Hospital, are brought against Messrs. Mosgrove, Lingwood, and Carrington, three of their fellow students, and believing these charges to be without foundation, resolve to combine for the purpose of investigating the evidence and laying it before a proper tribunal." Seconded by Mr. Tamplin, and carried unanimously.

Mr. Gaselee, in submitting to the meeting the next resolution, considered this as a question not affecting one or two pupils, but the school at large; upon which a stigma of misconduct had been levelled by some of the officers of St. Thomas's Hospital; for from the moment that the pupils of St. Thomas's had been desired,

* We have taken leave to condense considerably the report of our correspondent.—ED. GAZ.

by Mr. South, to separate themselves from the pupils of Guy's, it was clear that the imputation was cast upon the whole, and the odium of misbehaviour (if any) was attempted to be removed from the shoulders of the few to be affixed to the body of the school at large. He could not help expressing his surprise also at the unceremonious rejection which one of the accused gentlemen experienced, when he afterwards went over to the steward of St. Thomas's, with an anxious desire to afford such explanation on his part as should effect an amicable and satisfactory adjustment of what had occurred. He would add, that no three gentlemen could probably have been selected from the school of Guy's Hospital, upon whom the imputation intended to be conveyed could have been framed with greater *primâ facie* evidence of its untruth; for they were each distinguished in the school for his general propriety and demeanour.

Mr. Gaselee concluded by proposing the following resolution, which was also carried unanimously:—

"That, for the purpose mentioned in the first resolution, a Committee, consisting of Messrs. King, Tweedie, and Blackburn, be appointed, to collect the evidence and prepare the defence; and that all those who can furnish any information be urgently requested to place themselves immediately in connexion with this Committee."

The meeting then resolved itself into a Committee, at the chairman's suggestion. Those who had evidence to offer were to remain in the room, the rest retiring in good order and harmony; and the Committee, aided by their Solicitor (Mr. Peile), were engaged up to a late hour in examining the evidence.

PROTEST OF THE ST. THOMAS'S STUDENTS.

To the Editor of the Medical Gazette.

Sir,

The particulars of a disturbance which occurred in the operating theatre of St. Thomas's Hospital, on Friday last, have been circulated in the daily papers.

The surgical pupils of that institution have expressed to their medical teachers their indignation at the gross misconduct exhibited to strangers then present.

We are now desirous, through the medium of your journal, to give publicity to that declaration of our feelings, and convey to you, thus briefly, the expression of our abhorrence of such proceedings, and our conviction that they are alike discreditable to the character of the individuals concerned, and derogatory to that of a liberal profession.—We are, sir,

Your obedient servants.

[Between fifty and sixty signatures.]

PROCEEDINGS AT UNION HALL.

On Wednesday, the circumstances of the disturbance were brought under the cognizance of the magistrates of Union Hall Police-Office, when, charge and counter-charge being heard, the affair terminated for the present by the three students of Guy's, Messrs. Lingwood, Carrington, and Mosgrove, being held to bail to answer a prosecution by indictment at the ensuing Quarter Sessions. Mr. Jeremy considered some points involved in the case to be of too intricate a nature to allow him to dispose of the matter summarily.

LIST OF MEDICINES,

THE NAMES OF WHICH ARE CHANGED IN THE NEW PHARMACOPŒIA.

NOMINA PRIORA.	NOMINA NOVA.
Acidum aceticum dilutum.	Acetum destillatum.
——— muriaticum.	Acidum hydrochloricum.
Ammoniæ murias.	Ammoniæ hydrochloras.
——— subcarbonas.	——— sesquicarbonas.
Antimonii sulphuretum.	Antimonii sesquisulphuretum.
——— sulphuretum præcipitatum.	——— oxysulphuretum.
Antimonium tartarizatum.	——— potassio-tartras.
Arsenicum album.	Acidum arseniosum.
Bismuthi subnitras.	Bismuthi trisnitras.
Calcis murias.	Calcii chloridum.
Ceratum simplex.	Ceratum.
Confectio amygdalarum.	Confectio amygdalæ.
Confectio aurantiorum.	Confectio aurantii.
——— scammoneæ.	——— scammonii.
Cuprum ammoniatum.	Cupri ammonio-sulphas.

NOMINA PRIORA.	NOMINA NOVA.
Decoctum cinchonæ.	Decoctum cinchonæ cordifoliæ.
——— lichenis.	——— cetrariæ.
——— sarsaparillæ.	——— sarzæ.
——— sarsaparillæ compositum.	——— sarzæ compositum.
Emplastrum picis compositum.	Emplastrum picis.
Extractum cinchonæ.	Extractum cinchonæ cordifoliæ.
——— opii.	——— opii purificatum.
Ferri subcarbonas.	Ferri sesquioxydum.
Ferrum ammoniatum.	—— ammonio-chloridum.
—— tartarizatum.	—— potassio-tartras.
Hydrargyri oxydum cinereum.	Hydrargyri oxydum.
——— oxydum rubrum.	——— binoxydum.
——— oxymurias.	——— bichloridum.
——— submurias.	——— chloridum.
——— sulphuretum nigrum.	——— sulphuretum cum sulphure.
——— sulphuretum rubrum.	——— bisulphuretum.
——— præcipitatum album.	——— ammonio chloridum.
Infusum caryophyllorum.	Infusum caryophylli.
Linimentum ammoniæ fortius.	Linimentum ammoniæ.
——— ammoniæ subcarbonatis	——— ammoniæ sesquicarbonatis.
——— hydrargyri.	——— hydrargyri compositum.
——— saponis compositum.	——— saponis.
Liquor ammoniæ subcarbonatis.	Liquor ammoniæ sesquicarbonatis.
—— arsenicalis.	—— potassæ arsenitis.
—— calcis muriatis.	—— calcii chloridi.
—— cupri ammoniati.	—— cupri ammonio-sulphatis.
—— hydrargyri oxymuriatis.	—— hydrargyri bichloridi.
—— plumbi subacetatis.	—— plumbi diacetatis.
—— potassæ subcarbonatis.	—— potassæ carbonatis.
Magnesiæ subcarbonas.	Magnesiæ carbonas.
Mistura amygdalarum.	Mistura amygdalæ.
Mucilago acaciæ.	—— acaciæ.
——— amyli.	Decoctum amyli.
Oleum pulegii.	Oleum menthæ pulegii.
—— terebinthinæ rectificatum.	—— terebinthinæ purificatum.
Oxymel simplex.	Oxymel.
Pilulæ hydrargyri submuriatis compositæ.	Pilulæ hydrargyri chloridi compositæ.
—— saponis cum opio.	—— saponis compositæ.
Plumbi oxydum semivitreum.	Plumbi oxydum.
—— subcarbonas.	—— carbonas.
Potassa fusa.	Potassæ hydras.
Potassæ carbonas.	—— bicarbonas.
—— subcarbonas.	—— carbonas.
—— supertartras.	—— bitartras.
—— sulphuretum.	Potassii sulphuretum.
Pulvis antimonialis.	Pulvis antimonii compositus.
Sodæ carbonas.	Sodæ sesquicarbonas.
—— murias.	Sodii chloridum.
—— subboras.	Sodæ biboras.
—— subcarbonas.	—— carbonas.
Soda tartarizata.	—— potassio-tartras.
Spiritus camphoræ.	Tinctura camphoræ.
—— lavandulæ compositus.	—— lavandulæ composita.
—— pulegii.	Spiritus menthæ pulegii.
Syrupus aurantiorum.	Syrupus aurantii.
—— sarsaparillæ.	—— sarzæ.
—— simplex.	Syrupus.
Tinctura ferri ammoniati.	Tinctura ferri ammonio-chloridi.
—— ferri muriatis.	—— ferri sesquichloridi.
—— Rhei composita.	—— rhei.
—— sennæ composita.	—— sennæ.
Vinum antimonii tartarizati.	Vinum antimonii potassio tartratis.
Unguentum elemi compositum.	Unguentum elemi.
——— hydrargyri præcipitati albi.	——— hydrargyri ammonio-chloridi.

OUTRAGE AT APOTHECARIES' HALL.

We regret very much to state, that an outrage of the most violent and disgraceful nature took place on Thursday evening, at Apothecaries' Hall. A gentleman had been examined; and having answered the questions put to him in a manner which induced the Court to decline giving him a license, he took from his pocket one of those instruments loaded with lead which are called "life-preservers," and attacked those present in the most violent manner. Mr. Hardy was knocked down and dangerously wounded, by a blow on the head; Mr. Este and Mr. Merriman severely wounded on the face and temple. Mr. Taggart also received a slight blow on the head. The assailant was then mastered, and given in charge to the police. He was yesterday examined, and committed to stand his trial. It does not appear that either insanity or intoxication can be pleaded in excuse of this most outrageous proceeding.

There were above twenty students waiting to be examined: they conducted themselves in the most becoming manner, and the examinations were postponed till last night.

A writer, only in our last number, asked for the fruits of the "Crown and Anchor Meeting" of last season: let him behold a specimen of the consequences of that and the other systematic attempts of our contemporary to incense the students against the Worshipful Society.

INJURIOUS EFFECTS OF "WAKLEY'S ACT."

To the Editor of the Medical Gazette.

Sir,

I beg leave to send you the following case, as another illustration of the defective working of the act lately passed for the remuneration of medical men called to attend at coroners' inquests.

On Tuesday morning last, at about two o'clock A.M., a man was found apparently dead on a wharf near the City Road. I was called to attend between four and five o'clock, and on my arrival ascertained that life was extinct. No opinion could be formed as to the cause of death; but he was known to have been intoxicated on the previous night. The body was removed to the Islington Workhouse, where a post-mortem examination was performed, and it appeared that the man had died of apoplexy, without rupture as it appeared of any considerable vessel, and probably induced by excessive drinking, as the stomach contained a quantity of gin. I, of course, expected to be summoned to the inquest; but it took place without any medical evidence being required, and the jury brought in a verdict of—"Died of excessive drinking," on the evidence of two or three bargemen.

The objection to the production of medical evidence was founded on the necessity of paying the medical witness, according to the provisions of the new act. Now I need not argue for one moment on the necessity of medical evidence in cases of suspicious death; and can only declare that I am ready, gratuitously, at all times, to investigate such cases for the furtherance of the ends of justice, science, and humanity, and heartily desire to see a speedy repeal of an act which, though good in itself, thus enables the coroner to defeat these admirable purposes.

I remain, sir,
Your constant reader,
Robert H. Semple.

Islington, Dec. 22, 1836.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Dec.* 20, 1836.

Abscess	5	Bowels & Stomach	1
Age and Debility	30	Brain	2
Apoplexy	1	Lungs and Pleura	5
Asthma	10	Insanity	1
Childbirth	3	Liver, diseased	2
Consumption	42	Measles	3
Convulsions	19	Mortification	2
Croup	1	Paralysis	5
Dentition or Teething	5	Rheumatism	2
Dropsy	18	Small-pox	4
Dropsy in the Brain	7	Sore Throat and Quinsey	1
Dysentery	1	Stricture	1
Epilepsy	1	Thrush	1
Fever	6	Tumor	1
Fever, Scarlet	6	Unknown Causes	17
Gout	2		
Hernia	1	Casualties	4
Hooping Cough	6		
Inflammation	24		

METEOROLOGICAL JOURNAL.

Dec. 1836.	Thermometer.	Barometer.
Thursday . 15	from 32 to 40	29·80 to 29·75
Friday . . 16	29 43	29·59 29·94
Saturday . 17	28 47	29·99 29·98
Sunday . . 18	41 52	29·98 30·05
Monday . . 19	41 50	30·06 30·04
Tuesday . . 20	38 45	30·09 30·17
Wednesday 21	34 45	30·15 30·19

Prevailing winds, S.W.

Generally cloudy, except the 15th and 16th; with rain at times.

Rain fallen, ·2125 of an inch.

Charles Henry Adams.

Erratum.—In Mr. Lonsdale's paper, last week, page 405, second column, near the middle, *for* "external recti," *read* "internal recti."

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 31, 1836.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XIV.

Signs of Pregnancy further considered—Complications of Pregnancy—Dropsy—Ovarian tumors—Moles and hydatids—Extra-uterine Pregnancy—Cases of fallopian and interstitial pregnancy—Postmortem signs of pregnancy and conception — Corpora lutea — Medico-legal questions—Grounds on which the gravid state may be negatived—Pregnancy without consciousness, how far admissible—Prussian law—Responsibility of women in the pregnant state.

In my last lecture, I gave a summary account of the signs of uterine pregnancy, and confined myself chiefly to a notice of those which seemed more or less worthy of confidence, and most likely to serve the purpose of the medical jurist. It may be useful to recapitulate those signs: not, however, in the order in which they have already been stated, but in one suggested by a view to the requisites of practice; for it should be kept in mind, that a principal point expected to be determined by the medico-legal referee, is not only whether pregnancy exists, but *how long* it may have existed. What, then, are the signs which may be observed during the successive stages of utero-gestation?

First three months.—To say that we can have even *equivocal* signs of pregnancy in the living female, during the first two or three months, were almost too strong an assertion in forensic medicine. It is possible, indeed, that, in midwifery practice, an accoucheur may assure himself, partly relying on the statement of his patient, and partly on certain doubtful appearances which acquire some value in connexion with collateral testimony, that there is reason to believe a woman pregnant, within the first few months after avowed intercourse; but no such ground of belief can be assumed by the medical jurist: he can only rely on ocular, tangible, or audible signs; and of these, perhaps, there is only one that can be available at so early a period; I allude to the marked appearance of the areola—that is, when it *is* marked. The sign is by no means invariably met with in pregnancy; but when it does present itself, it affords a high degree of probable evidence. Towards the end of the second month, the turgescence of the nipple, and the development of the little glandular follicles, are principally to be observed, although the characteristic change of colour is not yet very distinct. "The colour, at this period," says Dr. Montgomery, "is in general little more than a deeper shade of rose or flesh colour, slightly tinged with a yellowish or brownish hue."

The examination of the breasts, even at this early period, may exhibit more signs than might immediately be expected. The gentleman just quoted relates the case of a girl who had incurred the risk of pregnancy, but contrived to lull suspicion, for a time, by staining her linen at the usual menstrual periods. Dr. Montgomery visited her during the third month, and found the areolæ so distinct, and exhibiting their proper characters so perfectly, that he was persuaded of her pregnancy. But perceiving, moreover, that the breasts were marked with those silvery lines observable on parts previously much distended, he told her his opinion, that she was then with child, and, further, that she had certainly been so before. She was so completely taken by surprise that she confessed the fact, and added that she had suffered much from distension of the

breasts, during the pregnant state, two years previously.

Fourth and fifth months.—There is a possibility of the movement of the fœtus being perceived towards the end of the fourth month. But when we recollect how many circumstances may tend to deceive us, no great expectations can be entertained on that head. If the female has a motive to feign pregnancy, she can readily puzzle her examiner by spasmodic contractions or twitches of the muscles under his hand. This sign, in fact, can only be properly observed when the woman is perfectly quiescent, or at least indifferent as to the result of the inquiry; and such is not a very likely case to occur in medico-legal practice. The stethoscope may, about this time, distinguish the placental *bruit*, and, according to some observers, the pulsations of the fœtal heart also can be heard. If these latter indications are observable, and that satisfactorily, the point is settled. But, for reasons already stated, we must not be too sanguine in expeeting, so soon, so high a degree of evidence.

The areola by this time has undergone a further degree of development, rendering those characters just now described in every way more distinct. The dark-coloured disk or circle, having a diameter of above an inch, around the nipple, and varying in the intensity of its hue, according to the complexion of the party, has nearly attained perfection; and the nipple itself, together with the integument immediately around its base, are pullulent with turgid glandular follicles. The moisture, too, of the parts is to be noticed.

Sixth month.—As the duration of pregnancy advances, the proofs accumulate. The areola, if such sign have made its appearance at all, is by this time perfect. The enlargement of the abdomen, provided it be found symmetrical, with an alteration in the navel, becomes a sign presumptive towards the fifth or sixth month. The auscultatory method of observation may now be applied with more chance of success. By the sixth month, the double pulsations of the fœtus will very probably be heard, provided the child be alive, and not inopportunely located. The touch will now most likely indicate the change of form of the cervix uteri; and the *ballottement*, or passive motion of the child, may be distinctly felt. Possibly the active movement of the fœtus may also be satisfactorily perceived by the application of the hand to the abdomen. Should we be fortunate enough to gather all these proofs, we may, without hesitation, pronounce positively for the pregnancy. But falling short of such an amount, or even though they be almost all absent, we had need to be guarded: we must still take care not to negative the possibility of the pregnant state.

Last three months.—Unless there be some remarkable complications in the case, the proofs during the seventh, eighth, and ninth months, are comparatively easy. All those already mentioned, except the *ballottement*, ought to be more or less ascertainable.

I shall illustrate these remarks by narrating to you some particulars of a French report, which I find in a recent medico-legal work. These official reports, by the way, which are prepared for the tribunals in France, are, many of them, as I have already observed, well calculated to instruct. They show the order in which the several circumstances deemed most important are usually observed in practice. The person examined in this instance was a young widow, eighteen years of age. Her husband had been dead for two months, and it was said she was *enceinte*. The medical jurists, to whom the personal inspection was committed, made their external observations, of course, first, and they particularly noted the enlargement of the breasts, and the appearance of milk in them; also, the enlargement of the abdomen, and the projection of the navel. They then proceed to say,—"Having requested Madame G. to stand up, leaning against a piece of furniture, with her legs a little apart, the forefinger of the right hand was introduced into the vagina, whilst the left pressed externally on the abdomen. We found that the uterus was much augmented in volume, and that it reached as high as the navel; its neck was turned upwards and backwards; and the *ballottement* left no doubt of the presence of a moveable body in the womb. The stethoscope being applied in the space between the umbilicus and the crural arch on the left side, enabled us to hear pulsations double as quick as those which were perceptible in other parts of the abdomen. From these observations, we conclude that Madame G. is in the sixth month of pregnancy, or thereabouts."

Other supposed signs.—In closing this account of the signs of uterine pregnancy, I ought to mention that I have omitted a multitude of others, purely because they were not suited to the purposes of the medical jurist. The state of the *pulse* during pregnancy, though it has the *prestige* of antiquity about it, being as old, indeed, as the time of Galen, need not delay us: nor should I occupy your time very profitably with an account of the *blood* in pregnant females. A word or two, however, may be devoted to the subject of the *urine* in pregnancy. Savonarola, towards the latter part of the fifteenth century, described a certain cloudiness which he said he noticed in the

urine of pregnant women; and Foderé thought the observation worthy of note, as he said he had verified its accuracy. But M. Nauché still more recently informs us, that if the urine of a pregnant woman be allowed to stand for thirty or forty hours, it deposits a white, flaky, pulverulent, grumous matter, which proves to be caseum, or the same kind of substance which is formed in the breasts during pregnancy. My able colleague, Mr. Pereira, has investigated the subject, so as in a great measure to set the question at rest. He has found "caseum or coagulated albumen" in the urine of women far advanced in pregnancy, but not invariably in that voided during the early months. He refers also to Gmelin's *Handbuch*, where it is mentioned, on the authority of Caballe, that caseum has been found in the urine of a healthy young widow; and on the authority of Wurzer, that it has been detected in the urine of a man whose breasts were previously swollen.

Complications of Pregnancy.

I have said that there may be complications of pregnancy, such as to interfere materially with our diagnosis. Some of these must be specially noticed.

Death of the fœtus.—The fœtus may be dead: how may this operate in obscuring our indications? In the first place, suppose the child to die in the second or third month, it is obvious that enlargement of the abdomen cannot be expected to be present. Nor can we, of course, appreciate several of those signs by which we should otherwise be enabled to say how far the pregnancy had advanced.

It happens not unfrequently that the embryo dies, and yet is not expelled as an abortion, but retained till the ordinary time of delivery. There is an interesting case in Dr. Gooch's book, which will at once serve to illustrate the difficulty, and to point out the conduct which it is most fitting to adopt under the circumstances. "A lady, after the usual symptoms of pregnancy for four months, had a slow hæmorrhage for many days. No ovum came away; the hæmorrhage stopped; but though her abdomen was enlarged, from that time forth it did not continue to increase. In this state, and without menstruating, she continued five months longer, when, at the end of the ninth month from her first calculation, labour pains came on and expelled a shrivelled fœtus, of the size of the third month. There can be little doubt that it had died before the hæmorrhage. The fact that her labour occurred just at the end of the ninth month, is one of the best proofs that labour commences at that time, not from distension of the uterus, but as a law of nature. It is curious that the same process took place in her next pregnancy: the fœtus was blighted about the same period, and yet was retained during the natural length of pregnancy. In such doubtful cases the most prudent plan is to avoid giving a decisive opinion, and, if pushed hard, to state the impossibility of doing so."

Suppose we have reason to believe the female pregnant, but have our doubts as to the life of the fœtus, how may those doubts be removed? The signs by which it is commonly judged that the fœtus has died during gestation are those experienced by the mother herself. She is said to have the sensation of a weight, or of a foreign body lying loosely in the abdomen. When she rises from her chair, when she turns in bed, stoops, or in any way changes her posture, she feels the rolling about of this weight.

These sensations, however, are of no great importance to the medical jurist, and scarcely so even to the obstetrician. A nervous sensitive mother is very apt to be mistaken. She feels great uneasiness, loss of appetite, has a bad taste in the mouth, is pale, and has a livid ring round the eyes; her breasts are flaccid, the cervix uteri is relaxed, fœtid mucus tinged with blood is discharged from the vagina, and there is a distinct feeling of cold in the lower part of the vagina.

Even these signs are extremely fallacious,—the last particularly so: it cannot but be the pure effect of fancy, for the putridity affecting the fœtus should rather increase the heat above that of the surrounding parts.

Is there, then, no sign on which the medical jurist can place reliance? Fortunately the method of auscultation here comes to his aid, which enables him either to say distinctly that the child is alive, or, upon a comparison of observations, that there is a strong presumption that it is dead.

Dr. Evory Kennedy gives a case in point —peculiarly applicable to our present purpose. "It may to the medical jurist become a matter of much importance, to arrive at accurate information on the subject of the child's life or death during the progress of pregnancy. A case illustrative of this fact occurred to the author about three years since, when assistant to the Lying-in Hospital. A woman, in the seventh month of pregnancy, was sent to that institution from the police office, to be examined whether her child was, as she asserted, killed in her womb by certain blows and other injuries inflicted upon her by a female with whom she had a scuffle. She described very accurately all the reputed proofs of the child's death as being pre-

sent. When, however, the stethoscope was applied, the fœtal heart's action was distinctly audible, and our announcement of the child's being alive dissipated all her hopes of legal vengeance, as she appeared to calculate upon hanging her antagonist at least. The prisoner, who was immediately dismissed, might, in the absence of this test, have been subject to a vexatious prosecution or imprisonment; and if the child had died subsequently, its death having no connexion whatever with the assault, she might possibly have been unjustly punished."

Recollect, however, that absence of the fœtal pulsation is no proof that the fœtus is dead, nor is absence of the *souffle*, for the placenta may be placed so as to be difficultly heard; and even though the placental souffle be detected, there may still be no living fœtus. So that under all the circumstances you will see how much caution is necessary.

Ovarian tumors. — There are diseases, such as enlargement of the ovary, which have sometimes led to mistakes. A careful and competent examiner, however, will not fail to detect the real state of the case: the *touch* is generally adequate to the purpose. If the enlargement of the abdomen be from an ovarian tumor, simply, the neck of the uterus is prominent and firm, unaltered, and its body unenlarged. But it may be a complicated case; there may be both ovarian tumor *and* pregnancy. The possibility of such a conjuncture must put us on our guard lest we hastily report on the presence of one state, omitting, perhaps, the more important. We shall need, in such circumstances, to put our best diagnostic tests of pregnancy in requisition.

Dropsy.—I have already alluded to the fact that pregnancy may be confounded with dropsy, and *vice versâ*. Drelincourt confesses that he mistook dropsy for pregnancy in the case of an unmarried woman; Salzmann tells us that he pronounced a pregnant woman to be merely dropsical; and Zimmermann relates that he was deceived in a case of pregnancy, considering it as tympanites. Dangerous errors are also on record of pregnant women having been tapped, the operators not knowing the risk they ran of wounding the uterus, and destroying both mother and child.

In distinguishing dropsy from pregnancy, a careful examiner will observe the superficial fluctuation—the diffused swelling of the abdomen, while the enlargement from a gravid uterus is generally circumscribed—and, above all, the absence of the characteristic signs of the pregnant state. When the disease, however, is complicated with dropsy, as it frequently is, we must be doubly cautious. Perhaps it would be a good rule, as well in ordinary as in medico legal practice, always to suspect pregnancy where ascites may be present in the married woman; and it might have prevented some serious mistakes, if the possibility of such a combination, in all females of a child-bearing age, had been, in certain instances, called to mind. Encysted dropsy is still more likely to simulate pregnancy, especially when attended with amenorrhœa, and the cyst occupies the lower fore-part of the abdomen. But should there really be no pregnancy, the uterus will be found empty, and all the chief signs of the gravid state will be absent.

Distensions of the uterus.—But sometimes the complication is within the womb, while there may or may not be a fœtus present: there may be air, water, moles, or hydatids. Tympanites of the uterus—*Physometra*—a malady in which the womb generates gases, which distend its cavity, and after a time are expelled,—is rather rare; and perhaps when air is formed in the organ, it is generally only contained in it for a very short time, when it deserves rather to be called *flatus* of the uterus. Dr. Gooch knew a lady who had this affection: air was expelled from the uterus with a noise many times a day. It was doubted whether it really came from the uterus; but the fact of her not being subject to the infirmity any longer the moment she became pregnant, seemed to put the matter beyond a question. Cases of *this* kind are said not to be rare. Dropsy of the uterus—*Hydrometra*—is not a common complaint, yet it may occur either simply or as a complication of pregnancy. J. P. Frank, in his excellent work *De Morbis curandis*, tells us of a German Princess, of a certain age, who was pronounced pregnant by her medical attendants: she, however, discharged a large quantity of water, and the uterus resumed its natural state. Not long after, the same symptoms appeared, and the same result was expected, when, to the confusion of her medical men, she gave birth to a living infant.

Moles and hydatids.—Moles and hydatids are another source of difficulty; and much caution is required for that reason, when we merely know that the uterus is enlarged; for it may contain something which, with or without a fœtus, may prove to be a solid sanguineous mass, or the product of a false conception.

The term Mole is applied to a great variety of substances which are found in the uterus,—some say even of women who have never known man: nuns have had moles, and their chastity has not been suspected; or rather they have found advocates who maintain that such an occurrence may take place, and yet the woman

have never conceived. These are called *false* moles, and are said to consist chiefly of sanguineous concretions. The menstrual fluid probably is retained, distends the womb, the form of which it assumes, and it is thus composed of successive layers: the colour and consistence of these masses vary much in different cases. But what are called *true* moles always contain the relics of a conception in some shape or other. It results from the death of the embryo, or the degeneration of the placenta, and of course its appearance will greatly depend on the period at which this death or degeneration takes place, and the length of time the organic remains lie deposited in the body of the organ: teeth and hair are frequently found in these amorphous masses.

Moles are classsfied by authors as chaotic, aqueous, fleshy, hairy, stony, bony, &c. (the product of conception), and again as sanguineous, windy, polypous, vesicular, &c. (not produced by sexual intercourse); but it may be sufficient for our purpose here to observe that they are often found of a very nondescript character. In a case related by Dr. Gooch, which strongly resembled pregnancy, but was attended with profuse discharges of water and blood, the patient died, and on dissection there was found in the cavity of the uterus (which was about big enough to hold two fists) neither fœtus nor hydatids (as some predicted), but a mass, about the size of a goose-egg, of stringy matter, like very soft placenta, and unattached to the inner surface of the uterus: this surface was red and irregular, like a granulating sore; its walls were thickened, as in pregnancy, of a dark red hue, and flaccid texture.

As to hydatids of the uterus, or those *cysts* resembling hydatids, as some prefer to consider them, they are a frequent cause of fallacy in obstetrical practice, and of course might happen to prove a serious cause of mistake in medico-legal inspection. There is considerable contrariety of opinion as to the origin of these cysts—some holding them to be independent of sexual intercourse — others the reverse. "The development of hydatid masses in the uterus," says M. Desormeaux, "is most frequently, if not always, a consequence of conception;" and the generality of observers are agreed as to this fact, that they are owing to morbid alterations of the ovum and placenta. Velpeau even thinks that the hydatiform granulations which are commonly found on the external surface of the chorion, are the normal condition, or the natural state, of the part during the first two months after conception. But be this as it may, the medical jurist had need be prepared for their occasional occurrence in the course of his practice.

This affection of the uterus is attended with remarkable enlargement of the abdomen; but it is also remarkable that the enlargement is generally disproportionate to the period of pregnancy, and that it becomes stationary after having advanced rapidly. A discharge of blood is also a common symptom of the gestation of hydatids; and it frequently gives alarm, from the apprehension of approaching abortion.

Polypus. — The only kind of polypus which can create difficulty is the interstitial—formed in the tissue of the uterus itself: the other kinds are in general easily recognized. But though we detect the presence of a polypus, we must not conclude hastily and at once that there is no fœtus; for polypus may occur as a complication of pregnancy. The late Dr. Beatty, of Dublin, gives an account of a case in which a lady, a patient of his, who had a uterine polypus weighing nearly four pounds, miscarried; the fœtus was one of about three months: the ovum was entire, the membranes not having been ruptured. The polypus itself was expelled in six days after, with pains resembling those of labour; the uterus was inverted by its descent, but on separation of the slight attachment between it and the tumor, it was easily restored to its place. Such cases, however, are considered to be very rare.

Extra-uterine pregnancy.—We sometimes meet with pregnancy of another sort, which, from some of its symptoms, might induce an inexpert examiner to suppose that there was rather an ovarian tumor, or some other abdominal disease present, than actual pregnancy. The pregnancy may be extra-uterine. The ovum, from causes which are imperfectly understood, sometimes fails of being carried into the womb; it may not quit the ovary; it may stop on its way while yet in the fallopian tube; it may even reach the tissue of the uterus, and then become developed: nay, it may fall into the abdomen, it is said; and according to these several circumstances the pregnancy is termed ovarian, fallopian, interstitial, abdominal, &c. —mere special appellations, which are all included in the general name of extra-uterine. But wherever the ovum is deposited, a peculiar development takes place: a cyst is formed about it, which serves it for a uterus. And what is remarkable, and might, if not duly attended to, lead us into error, is, the peculiar development of the uterus itself: whether the ovum reach that organ or not, it enlarges and acquires at least two or three times its ordinary volume; and its inner surface is lined with a deciduous membrane. In a case observed by Chaussier, the neck of the uterus was sufficiently dilated to admit the introduction of the finger.

The results of extra-uterine pregnancy

are often very curious. They are frequently fatal, but have sometimes proved no impediment to the fecundity of the mother. I saw a case some time ago, in which a woman survived a fallopian pregnancy, and bore three children before the extra-uterine fœtus was extracted. It was not till eight years after the conception that this event occurred: a spontaneous process of ulceration taking place near the umbilicus, the opening was enlarged, when the fœtus was removed, and found to be in excellent preservation;—it measured 22 inches in length, and was well formed. The mother was still alive when I saw her, about a week after the operation; she was then a patient in a fever hospital, and not specially under treatment for the circumstances just mentioned.

Albert Meckel quotes a case which occurred in the year 1820, and has been recorded in some of the German journals. The wife of a rope maker remained pregnant for six years, during which time she gave birth to two living children. At length she was delivered *per naturales vias* of her weary burden, which proved to be a perfectly well-formed and mature fœtus, dead of course, but the mother recovered. The pregnancy, in this instance, is supposed to have been of the interstitial kind.

The signs of extra-uterine pregnancy are generally too obscure and complicated to enable us readily to recognise it: in some cases it is not till after death, or at least till the period of natural labour has passed without delivery, that the fact is ascertained: previous to this we can at best only suspect the true state of things. Some particulars from a report on extra-uterine pregnancy, by Orfila, are deserving attention:—

"Upon reaching her chamber we found Madame N. in bed. She said she was six months gone with child, and told us that during that period the catamenia had been suppressed, and she had a constant feeling of weight and obstruction in the pelvis. We were further informed that the belly had increased in volume only on one side, and that its elevation had frequently occasioned the sharpest pains; that she had felt the infant move about the end of the fifth month, but since then had perceived no sort of movement. We proceeded to an examination, and recognised towards the right iliac fossa a tumor of a round moveable character, the corresponding region on the other side of the abdomen being much less swollen. The uterus was pushed to the left; it seemed to be about double the size of what it is in women who are not pregnant; the orifice of the uterus, elastic and elongated, was not closed; the hand was introduced into the womb, but no fœtus was there. While moving the sides of the vagina laterally and from below upwards, very unequivocal motions of ballottement were distinguished. The stethoscope applied to various parts of the abdomen detected no contractions or pulsations. Furthermore, the patient suffered much from sharp pains in the whole of the lower part of the abdomen, and complained of excessive thirst. Her skin was hot, and she had much fever, sleeplessness, loss of appetite, and sometimes diarrhœa. We hence infer that Madame N. is pregnant, and that her pregnancy is extra-uterine."

Post-mortem signs of pregnancy.—Where the female has died, and the question of pregnancy is raised, we have ample opportunity of deciding it on inspection of the internal parts. If we find the ovum with its normal appendages in the uterus, the case is clear; but even though the ovum be not detected, in consequence of the very early period of pregnancy—say in the first week or fortnight—we may still have evidence in the state of the womb, and particularly in the state of one or other of the ovaries. If there have been a recent conception, there must be a corpus luteum found: the presence of this body gives us the strongest possible assurance—indeed, I should say, the certainty of the fact. I have already noticed this very striking drawing from nature by Dr. Hope, and I beg once more to call your attention to it.

In the left ovary you see a regular corpus luteum, with the cicatrix belonging to it, marked by a bristle. There was a recent laceration of the hymen, gelatinous fluid was found in the cavity of the uterus and fallopian tubes, and such other changes were observed as, taken together, could not leave a doubt of the fact of recent conception. The characters of the corpus luteum ought to be well understood by the medical jurist, for mistakes have been made on the subject by many whose names have weight in the medical world. Such mistakes, however, are likely to be prevented in future by the complete account of corpora lutea given by Dr. Montgomery, in the masterly article already so frequently referred to. I must say, I never read a more convincing piece of medical criticism than that in which the Dublin professor exposes the misconceptions of several who treated on this point before him; and though he cannot be said to introduce any innovation in physiology by the views which he advocates—they being, in fact, those of Haller and Meckel—yet his details are so full and accurate, that he may be said to have made the subject entirely his own. On the present occasion I must be content with referring you to the article in question: in

Fig. 19.

the next lecture I shall perhaps have to notice it more particularly.

Medico-legal Questions.

A variety of questions suggest themselves in relation to the pregnant state; but it will not be possible to notice more than a few. For instance: can we, as medical jurists, in any case pronounce a woman *not* pregnant?—Decidedly; when she labours under a physical disability, such as absence of a uterus and ovaries; and most probably when her age is such as to disqualify her. In the case of Johanna Southcote, who was sixty, some of her medical examiners were deceived by her fat and flatulence; but Johanna would never allow them to try test of the *touch;* "her warning spirit," she said, "forbade her to submit to that."

Again: can we determine, in the case of an abnormal pregnancy, whether a woman bears a mole? A set of symptoms are given by some authors; but, without entering into particulars, we may say that there is probably no difference between the gestation of a mole and a dead fœtus. We must take time, and abide the issue.

There are one or two other questions upon which the medical jurist ought to have clear and collected opinions. He may be asked, with reference to the moral character of a female who is pregnant, and who has no right to be so, whether, contrary to what she may assert, she must necessarily have been conscious of the act of coition? for women have again and again denied, in certain circumstances, that they have ever had to their knowledge carnal intercourse with a man. They have in some instances gone on even to the moment of delivery, apparently not knowing themselves pregnant, or insisting upon the impossibility that they should be so, since they had no connexion with any one. Pregnancy, of course, never happens without connexion (though it has been sometimes contended that it might!) so that when the presence of that state is established, the question is simply this—might a person have taken advantage of her, and got her with child without her knowing any thing about it? There are a number of cases on record, which would seem to determine the reply in the affirmative. Not to go back to the well-known story of the girl who was laid out for dead, and who was impregnated in this condition by an ecclesiastic, who watched by her bier,—in a compendium of midwifery not long since published* there is the following case:—"A maid at an inn, who was always thought to be virtuous, and bore a good character, began to enlarge in a way which excited suspicions of pregnancy. She solemnly declared that she never had connexion with any man. At length she was delivered, and was afterwards brought before a magistrate to swear to the father; but she repeated her former declaration. Not long afterwards a postboy related the following circumstances: that one night he came late to this inn, put his horses into the stable, and went into the house; he found all gone to bed except this girl, who was lying asleep on the hearth-rug, and without waking her he contrived to gratify his desires. This shews," adds the author, "that impregnation may take place without the knowledge of the female." A case, the complete counterpart of this, is given by Dr. Montgomery, in his essay on the Signs of Pregnancy.

Capuron says "It is a fact, which experience has more than once confirmed, that a woman may become pregnant while in a state of hysteria—under the influence of narcotics — during asphyxia, drunkenness, or deep sleep; and consequently without being conscious of it, or sharing the enjoyment of the man who dishonours her;" and, in proof, he mentions having attended a young woman who was got with child while totally un-

* Compendium of Gooch's Lectures on Midwifery, p. 81.

conscious, being buried in a deep sleep, produced by punch given her by her paramour. Such cases as these ought to render us careful in pronouncing a severe opinion, when we are consulted in charges of concealment of the birth; for if a woman may become pregnant without knowing it, there is some chance, if she be not very quick-witted or have experience, that she shall go on to the time of her delivery unconsciously, and without having made any preparation for that event, whereby the life of the infant is compromised.

Women have often been really ignorant of their condition, though they have confessedly incurred the risk. There is a well-authenticated story of a simple-minded girl, who yielded to her lover in a bath, because he told her that no consequence would ensue from a connexion under such circumstances: she believed him, and could not be persuaded that his word was untrue till the moment of her delivery. Klein also, as quoted in Henke's *Abhandlungen*, gives two cases which came under his cognizance; one, that of a married woman, who, even in the pains of labour, believed herself ailing otherwise than with pregnancy; and the other that of a young girl, who was confident, even in the ninth month, that she was not pregnant, because she had had only one connexion; and her seducer told her that in such a case there could not possibly be any consequences. Thus there may evidently be three states to account for the ignorance of the female: 1. Some disease resembling pregnancy; 2. Menstruation (as it sometimes does) occurring after a fruitful intercourse; and 3. An erroneous impression deeply rooted.

The practitioner had need to be carefully on his guard when he has to deal with women who make these assertions; for while he bears in mind the *possibility* of the truth of what they say, he must also recollect the obstinacy with which they often maintain that they are not pregnant, when they know they are, and yet dare scarcely confess it to themselves. "It appears difficult to explain," says Dr. Gooch, "the obstinacy of assurances which those who make them know to be false, but I suspect they deny to the last that they *can* be pregnant, because they hope to the last that they *are not* so. Another circumstance likely to bias the medical man, is the respectability of the patient; but this, too, must be disregarded. Single women sometimes become pregnant in all ranks of life, not only among the low but among the high, and not only among these, but in the middle ranks; and the practitioner, in his intercourse with the world, will often be placed in puzzling situations, and have to listen to very curious disclosures."

I may here mention, that the Prussian law refuses to believe that a woman can arrive at an advanced stage of pregnancy without knowing it: "after the 30th week," it expressly states, "no plea of ignorance can be admitted."

Another medico-legal question connected with pregnancy is, whether a woman in the pregnant state is always to be accounted a responsible agent—whether, in fact, those longings, and peculiar states of mind which we know to be common in pregnancy, should form any excuse for a female who would be otherwise criminally judged? Medical men have sometimes been consulted on this head, and the inquiry has generally been limited to this—whether a pregnant woman may so be got the better of by her imagination, and may have her will so depraved, as to be impelled to commit certain crimes—more especially theft? I believe the truth to be, that such an admission is in many cases unavoidable; but it would be a dangerous precedent to admit it generally: social order might suffer severely from such an indulgence: a woman with a propensity to thieving in all states of her system would have a dangerous latitude allowed her, if she were protected by her pregnancy. If, however, the disturbance of the mind be extraordinary, the medical jurist who is consulted will not have much reason to hesitate in excusing the woman: but if otherwise, it will be his duty to refer the magistrate to some other quarter for the elucidation of the question—for it does not properly belong to medicine. The legal functionaries will in general be the best judges how to act, by comparing the character of the accused in her ordinary unimpregnated state with her conduct while pregnant: by considering her circumstances, whether she is in no want—or whether she is distressed: considerations such as these will throw more light on the question, than any medical evidence to prove that the woman is of an irritable temperament, or of a melancholy or hypochondriacal state of mind.

LECTURES
ON
MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LIV.

Strychnia.

History.—On the 14th December, 1818, Pelletier and Caventou announced to the

French Institute the discovery of a new vegetable alkali, to which they proposed to apply the term *vauqueline*, because the celebrated Vauquelin was the first to signalise the existence of an organic alkali. Magendie proposed to denominate it *tetanine*, to express its effects, as this term would then be in harmony with morphine and emetine. The term *strychnia*, however, was considered most appropriate, and, therefore, has been usually adopted.

Native state.—Hitherto it has been found only in certain species of the genus Strychnos, namely, S. nux vomica, S. Ignatia, S. Colubrina, and S. Ticuté. Probably, also, it is contained in S. Guianensis, which yields the American poison *Urari*. It is frequently associated with another alkali (brucia), and is always combined with an acid.

Preparation.—There are several methods by which strychnia may be procured; one of them is the following:—Boil nux vomica in water, evaporate the strained decoction to the consistence of syrup, and then precipitate by slaked lime. The precipitate is to be collected on a filter, washed first with water, and then with weak spirit, and afterwards dried and pulverised. It is then digested in rectified spirit, and the alcoholic solution distilled: the residuum is *impure strychnia*. To purify this add dilute sulphuric acid, boil with animal charcoal, and precipitate by ammonia: the product is termed *precipitated strychnia*. To separate the brucia which this usually contains, it is to be digested in weak spirit, which dissolves the brucia and leaves the strychnia. Or convert the two alkalies into nitrates; the nitrate of strychnia may be separated by crystallization.

Theory of the process.—By boiling nux vomica in water, we obtain a solution of the strychnates (or igasurates) of strychnia and brucia, along with gum and some colouring matter. The lime which is added unites with the strychnic (or igasuric) acid, and sets free the strychnia and brucia. By washing with water and weak spirit, part of the impurities (the gum and colouring matter) is removed. By digestion in rectified spirit we obtain a solution of strychnia, brucia, and colouring matter, which constitute the impure strychnia. By the addition of sulphuric acid two sulphates of the alkalies are formed; and by boiling with charcoal the colouring matter is got rid of. By the addition of ammonia, strychnia and brucia are precipitated. Brucia being soluble in weak spirit, is readily separated from the strychnia.

The process given in the new London Pharmacopœia is the following:—Boil for an hour two pounds of bruised nux vomica with a gallon of rectified spirit, in a retort with which a receiver is connected. Pour off the liquid, and boil the residuum with another gallon of spirit and the recently distilled spirit. Having poured off this liquor, treat the residuum a third time in the same manner. Express the nux vomica, and distil the spirit from the strained and mixed liquors, and evaporate the residuum to the consistence of an extract, which is to be dissolved in cold water and filtered. Evaporate by a gentle heat to the consistence of syrup, and to the liquor, while warm, add gradually a sufficient quantity of magnesia to saturate it, shaking them together. Set aside for two days, then pour off the supernatant liquor. Express what remains wrapped in linen; boil it in spirit, strain, and distil the spirit. Add a very little dilute sulphuric acid mixed with water, and macerate with a gentle heat. Set aside for twenty-four hours, that crystals may form. Express and dissolve these. Lastly, add ammonia to these, dissolved in water, shaking now and then, that the strychnia may be precipitated. Lastly, dissolve this in boiling spirit, and set aside, that pure crystals may be formed.

Theory.—The theory of the pharmacopœial process is readily comprehended. The watery solution of the alcoholic extract contains the strychnates of strychnia and brucia: the magnesia decomposes these, abstracts the strychnic acid, and precipitates the strychnia and brucia. The sulphuric acid which is added converts them into sulphates, which are decomposed by the ammonia, strychnia being precipitated along with some brucia.

Properties.—Pure strychnia is a white, odourless, intensely bitter, crystalline substance, the form of the crystal being the octahedron, or four-sided prism. When rapidly crystallized, it assumes a granular form. It is fusible, but not volatile; decomposing at a lower temperature than most vegetable bodies. Though so intensely bitter, it is almost insoluble in water, one part of strychnia requiring 6667 parts of water, at 50°, to dissolve it; that is, one grain needs nearly fourteen ounces of water to hold it in solution. It requires 2500 parts of boiling water to dissolve it. It acts on vegetable colours as an alkali, saturates acids forming salts, and separates most of the metallic oxides (the alkaline substances excepted) from their combinations with acids. In some cases part only of the metallic oxide is precipitated, a triple salt being formed. This is the case with the sulphate of copper: strychnia boiled with this salt throws down part of

the oxide of copper, while a green solution of sulphate of copper and strychnia remains.

Composition. — This base is anhydrous. According to Liebig it consists of—

30 atoms carbon, 30 × 6	180
16 atoms hydrogen	16
1 atom nitrogen	14
3 atoms oxygen, 3 × 8	24
1 atom strychnia	234

Characteristic tests.—Pure gallic acid does not precipitate it. Tannic acid, or infusion of galls, precipitates the tannate of strychnia. The strychnia of the shops is coloured red by nitric acid, though pure strychnia is not. The substances present in ordinary strychnia, which thus become coloured by nitric acid, are brucia and a yellow incrystallizable matter, which is with difficulty separated. This red colour is destroyed by the addition of some deoxidizing agents, as sulphurous acid, and sulphuretted hydrogen. Hence the phenomena of coloration appear to depend on oxidizement. This colour produced by nitric acid passes successively from red to yellow. By a prolonged action of the nitric acid, oxalic acid is formed. When the solution has become yellow by nitric acid, deoxidizing agents no longer decolorize it. If potash be added to a very concentrated solution of a strychnia salt, which has been reddened by nitric acid, an orange precipitate is formed. An excess of water redissolves this precipitate. The salts of iron are not coloured by the addition of strychnia. Another character of strychnia is its action on the salts of copper before mentioned.

Salts of Strychnia.—When pure, they are for the most part crystalline, white, and very bitter. They possess the following chemical characters:—

1. They are precipitated by the alkalies and their carbonates.
2. As usually met with in the shops, they are reddened by nitric acid.
3. They are precipitated by tannic, but not by gallic acid.
4. They are unchanged by the action of the persalts of iron.

1. *Sulphates:* (*a.*) *Neutral.* — Exists in the form of small cubes, soluble in ten parts of water at 59° Fahr., and of course in a less quantity at a higher temperature. When heated, it fuses and loses three per cent. of its weight, probably water of crystallization: but Liebig detected no water in sulphate dried at 212°; so that if it had contained water, this temperature must have expelled it. It consists of

1 atom strychnia	234
1 atom sulphuric acid	40
	274

(*b.*) *Bisulphate.*—It has an acid and bitter taste, and crystallizes in slender needles.

2. *Nitrates:* (*a.*) *Neutral.*—It crystallizes in pearly needles, grouped in stars. It is much more soluble in hot than cold water; is slightly soluble in alcohol, but does not dissolve in æther. When heated to a little above 212°, it decomposes and becomes yellow, swells up, detonates slightly (but without the disengagement of light), and leaves a carbonaceous mass behind. If the strychnia contain brucia, the nitrate has a reddish tint.

(*b.*) *Binitrate.*—Crystallizes in very fine needles. When heated, decomposes, becomes red, and detonates with the disengagement of light.

3. *Hydrochlorate or Muriate.*—This salt crystallizes in four-sided needles, which lose their transparency in the air. It is much more soluble in water than the sulphate. When heated, it is decomposed with the evolution of hydrochloric acid.

Physiological effects. — The effects of strychnia are of the same kind as those of nux vomica, but more violent in degree. As ordinarily met with in the shops, it may be regarded as about six times as active as the alcoholic extract of nux vomica. The following are a few examples of its poisonous operation:—

(*a.*) *On animals.*—Dr. Christison says, "I have killed a dog in two minutes with a sixth part of a grain, injected, in the form of alcoholic solution, into the chest; I have seen a wild boar killed in the same manner with a third of a grain, in ten minutes." Pelletier says, "half a grain blown into the mouth of a dog produced death in five minutes." Half a grain applied to a wound in the back of a dog caused death in three minutes and a half. In all these and other instances death was preceded and accompanied by tetanus. The salts of strychnia act in a similar manner.

(*b.*) *On man.*—Some individuals are more susceptible of the action of strychnia than others. Andral has seen a single pill, containing one-twelfth of a grain, cause slight trismus, and the commencement of tetanic stiffness of the muscles; while in other cases, the dose may be gradually increased beyond a grain with comparative little effect. The largest dose I have given is a grain and a half, and this was repeated several times before the usual symptoms indicative of the affection of the system came on.

Uses.—The uses of strychnia are precisely those of nux vomica already mentioned.

Mode of exhibition.—Strychnia is usually given in doses of one-sixth of a grain, gradually increased until its effects on the muscular system are observed. It is commonly made into pills, by means of conserve of roses; or it may be dissolved in alcohol, or in acetic acid. The salts of strychnia, as the sulphate, nitrate, or hydrochlorate, may be given in doses of one-twelfth of a grain. In amaurosis strychnia is employed after the endermic method, as already noticed.

Antidotes, and mode of detection in the contents of the stomach.—These are the same as for nux-vomica, before mentioned.

Brucia.

History.—This alkali was discovered in 1819, by Pelletier and Caventou, in the bark called *false angustura*, which was at one time supposed to be the product of the *Brucia antidysenterica*. As, however, this is now known not to be the origin of the bark, the term brucia is of course objectionable, and some have proposed to term it *pseudo-angustine*.

Native state.—It exists not only in this false angustura bark, but also in nux vomica and St. Ignatius's bean; in the two latter cases it is associated with strychnia, and is in combination with igasuric or strychnic acid, but in the false angustura bark it is combined with gallic acid.

Preparation.—It is prepared by the same process as already described for making strychnia.

Purification.—To purify this alkali, convert it into an oxalate, which is insoluble, or nearly so, in alcohol. Wash with cold alcohol, to remove the colouring matter. Afterwards, decompose the oxalate by magnesia, and separate the brucia by boiling alcohol.

Properties.—Brucia in the anhydrous form, as obtained by fusing it, has a waxy appearance; but when combined with water, it is capable of crystallizing, the form of the crystals being oblique four-sided prisms; or sometimes the crystals have a pearly laminated appearance, something like boracic acid. Its taste is very bitter, though less so than strychnia. When the crystallized brucia is heated, it gives out 17 per cent of water, and fuses.

Solubility.—It is soluble in 850 parts of cold, or 500 parts of boiling water; but the presence of colouring matter, of which it is difficult to deprive it, promotes its solubility. It is very soluble in alcohol, but is insoluble in æther and the fixed oils, and is very slightly soluble only in the volatile oils.

Composition.—According to Liebig it consists of

32 atoms carbon	192
18 atoms hydrogen	18
1 atom nitrogen	14
6 atoms oxygen	48
1 atom anhydrous brucia ..	272
6 atoms water	54
1 atom crystallized or anhydrous brucia	326

Characteristics.—*Nitric acid* assumes a fine red colour when added to brucia: deoxidizing agents, as sulphuretted hydrogen and sulphurous acid, decolourize this solution. Iodic and chloric acids produce the same phenomena as nitric acid.

Salts of brucia.—These are readily formed by saturating dilute acids with brucia. They possess the following properties:—for the most part they are soluble and crystallizable, and have a bitter taste. They are decomposed by potash, soda, ammonia, the alkaline earths, morphia, and strychnia, which precipitate the brucia. They are precipitated by tannic acid. Nitric acid colours them as it does free brucia.

Physiological effects.—The effects of brucia on man and animals appear to be precisely similar to those of strychnia, though larger doses are required to produce them.

Uses.—The uses of brucia are those of strychnia and nux vomica before related.

Mode of administration.—The dose of brucia is from half a grain gradually increased to about five grains. It may be given in the same way as strychnia.

Antidote.—Poisoning by brucia is to be treated like that for nux vomica.

Strychnos Ignatia.

St. Ignatius's bean, says Alston, came into the Dutch shops about the latter end of the 17th century. But there is some reason to suspect they were known long before this, and are probably the substances which in the Latin translation of Serapion was denominated *nuces vomicæ*. Dale gives, as one of their synonymes, "Igasur, seu Nux vomica legitima Serapionis." They are obtained from the Strychnos Ignatia (called by some Ignatia amara), a tree indigenous to the Philippine Islands, whose fruit is smooth and pyriform, and contains about twenty seeds. These seeds, the St. Ignatius's beans of the shops, are about the size of olives, rounded and convex on one side, and somewhat angular on the other. Externally they are brownish, with a bluish grey tint. Within the envelopes of the seed is a very hard horny or cartilaginous albumen, in whose cavity

is contained the embryo. These seeds have been analysed by MM. Pelletier and Caventou, who found their constituents to be the same as those of nux vomica, though in somewhat different proportions. Their effects, therefore, are similar.

False Angustura Bark — Bark of Strychnos ——— (?)

History.—In 1804, Dr. Rambach a physician at Hamburgh, observed that some specimens of angustura bark, said to be from the East Indies, acted as a powerful poison; and as repeated cases of poisoning occurred with the same substance, an order was issued forbidding the use of angustura bark. On the 15th October, 1815, the Commission of Health of the grand duchy of Baden ordered all the angustura bark in the possession of the apothecaries to be seized and placed under a seal; the physicians at the same time receiving an intimation that they were not, in future, to prescribe this bark. Similar ordinances were issued in Austria, Bavaria, and Wirtemberg.

The origin of the bark is said, by Batka, to be as follows: a quantity of it was imported from the East into England, and not being saleable was sent to Holland; and as no better means of getting rid of it offered, it was mixed with, and sold as, genuine angustura or cusparia bark.

Botanical history.—Great obscurity has long existed as to the tree which yields it. At first it was attributed to the *Brucea ferruginea*, or *antidysenterica*, a native of Abyssinia, belonging to the family Xanthoxylaceæ; but in 1831 Geiger had occasion to examine the bark of the B. ferruginea, and found that it had no resemblance to false angustura. Now the composition and effects of this bark render it in the highest degree probable that it is the product of some tree of the family Strychnaceæ, most probably of the genus Strychnos; Batka says of the S. nux vomica, or some neighbouring species. I have carefully examined the specimens of this genus in the herbarium of the Linnæan Society, and found on one of the native specimens of the nux vomica plant, in Dr. Wallich's collection, a slight fungous-kind of excrescence, somewhat analogous to that found on the false angustura bark.

Description of the bark.—It occurs in quills or flat pieces (*angustura falsa convoluta* seu *plana*), or in pieces arched backwards, having the twisted appearance of dried horn. It is more compact and heavy than real angustura bark. The epidermis varies: sometimes it consists of a dark fungoid or spongy rust-coloured layer (hence the term *angustura ferruginea*), which is only the altered epidermis; at other times it is not thick, not fungous, but covered with numerous whitish prominences, formerly supposed to be some species of lichen, but now known to be only an epidermoid alteration, the more advanced stage of which constitutes the rust-coloured layer already mentioned. The powder is intensely bitter, and of a yellowish white colour.

Composition. — The following are the constituents of this bark, according to the analysis of MM. Pelletier and Caventou:—

1. Gallate of brucia.
2. Fatty matter (not deleterious).
3. Gum (a large quantity).
4. A yellow colouring matter (*Strychnochromin*) soluble in water and alcohol.
5. Sugar (traces).
6. Lignin.

Chemical tests.—By reference to the constituents of this bark, the action of the tests for it may be readily understood. An infusion of this bark reddens litmus, in consequence of the excess of acid present. Strong nitric acid added to this solution produces a red colour; and by dropping the acid on the inner surface of the bark, a blood-red spot is produced: in both these cases the effect arises from the action of the acid on the brucia. If nitric acid be applied to the external surface of the bark, it produces a deep green colour, in consequence of the action of the acid on the yellow colouring matter. Infusion of galls added to the infusion of this bark occasions a white precipitate of the tannate of brucia. Sulphate of iron colours the infusion green, from its action on the yellow colouring matter.

Physiological effects. — (*a*) *On Animals.*—The experiments of Pfaff, the Vienna Faculty, Emmert, Meyer, Orfila, Magendie, and Jäger, have shown that it is a powerful poison to dogs, rabbits, wolves, and other animals. Thus eight, twelve, or eighteen grains of it kill dogs, the symptoms being precisely the same as those of nux vomica already detailed. (*b.*) *On Man* it also acts as a powerful poison. Emmert mentions that a boy who had taken by mistake the decoction of this bark died therefrom. His intellectual powers were unaffected; he entreated his physician not to touch him, as violent convulsions were immediately brought on; he was powerfully sweated, but did not vomit. Professor Marc was nearly poisoned by swallowing through mistake three quarters of a liqueur glassful of a strong vinous infusion.

Uses.—It is sometimes employed for the

extraction of brucia, in consequence of this alkali existing in this bark unmixed with strychnia.

Antidote. — The treatment of cases of poisoning will be precisely the same as for nux vomica.

Upas or Java Poison.

The poison tree of Java has been rendered notorious principally in consequence of certain gross fabrications and mis-statements made concerning it about the year 1780, by a person of the name of Foersch, said to have been a surgeon in the service of the Dutch East India Company. Malefactors, says this author, when they receive sentence of death, are offered the chance of life, if they choose to collect this poison; and although every precaution is taken to prevent its action on the system, out of seven hundred persons who went to collect it, only two returned alive; and from their reports, no living being (vegetable or animal) is to be seen for a wide tract of country around it. Foersch says he himself found this to be the case for eighteen miles in every direction from the tree!!! Darwin, believing this report, has made it the subject of his muse in the third canto of his "*Loves of the Plants.*"

1. *Upas Antiar.*—The account given by Foersch has long been known to be a gross falschood and imposition, principally by the researches of Dr. Horsefield and M. Leschinault. From their accounts, it appears that the *true poison tree* of Java (the *Arbor toxicaria* of Rumphius), is called *Antshar* or *Antiar* (*Antiaris toxicaria* of botanists), and belongs to the family Urticaceæ. It is one of the largest forest trees of Java, being from 60 to 100 feet high. Here is a drawing of it, taken from a recent publication of a German botanist.

Fig. 146. — *Abor. toxicaria. Ipo.* Rumph. *Antiaris toxicaria.* Leschinault.

You will observe he has strikingly represented the non-poisonous qualities of its emanations, by his picture of the richness of the surrounding vegetation, by the parasitic plants, and birds depicted on the tree, as well as by the natives in its immediate neighbourhood.

Preparation.—The juice contained in the

bark of this tree is viscid, milky, and bitter. It is extracted by incision, and when boiled to the consistence of an extract with the juice of arum, galanga, onions, garlic, pepper, and capsicum, forms the *Oopas* or *Upas* poison, and which is employed for the purpose of poisoning arrows.

Composition. — Pelletier and Caventou analysed this poison, and found it composed of—

1. A peculiar elastic resin.
2. Slightly soluble gummy matter, analogous to bassorine.
3. A bitter matter, soluble in alcohol and water, and composed of three substances:
   (*a*). A colouring matter, absorbable by charcoal.
   (*b*). An undetermined acid.
   (*c*). A substance precipitable by the tincture of galls, and which is the active principle of the poison. As it is probably alkaline, it has been termed *Antiarine*.

Effects. —The symptoms which result from its action on the system indicate a double influence exercised on the nervous system and stomach. According to Andral, its action is not absolutely identical with the Upas Tieuté, to be mentioned presently: the first produces clonic convulsions, or convulsions with alternations of relaxation; the second causes tonic convulsions, or tetanus properly so called. Moreover, the Upas antiar, after becoming absorbed, irritates the stomach. According to Sir B. Brodie, death results from the heart being rendered insensible to the stimulus of the blood.

2. *Upas Tieuté.* — But besides the Upas antiar just described, there is another poison yet more violent, produced in Java from a large winding shrub called the *Tieuté* or *Tshittik* (the *Strychnos Tieuté* of botanists), belonging to the family Apocynaceæ. Its roots extend themselves horizontally sometimes to a considerable length; and its stem occasionally ascends to the top of the largest forest trees.

Preparation.—To obtain the poison, the bark of the tree is boiled in water, and the decoction filtered and evaporated to the consistence of an extract: onions, garlic, pepper, galanga, ginger, and capsicums, being added to render the supposed charm good.

Composition.—This poison also has been analysed by MM. Pelletier and Caventou. It contains—

1. Strychnia, combined with an acid (igasuric?)
2. Reddish brown colouring matter (*strychno-chromine*), which becomes green when mixed with nitric acid.
3. Yellow soluble colouring matter, which is coloured red by nitric acid.

These celebrated chemists detected no brucia in this poison.

Effects. — The active principle of this poison being strychnia, its effects are precisely similar to those produced by nux vomica and strychnia. Thus, when applied to wounds, injected into the serous sacs or blood-vessels, or applied to the mucous membrane, it produces tetanus, asphyxia, and death. Forty drops of upas dissolved in water, and injected into the pleura of an old bay horse, gave rise almost immediately to tetanus and asphyxia, and the animal died after the second attack.

Lignum Colubrinum, or Snake-Wood.
(*Strychnos Colubrina.*)

In countries infested with poisonous serpents, the natives have usually some substance which is fancied to possess the power of preserving them from the bites of these poisonous animals; and thus we have various articles, seeds, roots, and woods, which have the word *snake* prefixed to them.

In Asia there has long been known a wood which has been supposed to possess the above-mentioned property, and it has, therefore, been denominated *snake-wood*, or *lignum colubrinum*. The specimens, however, met with in commerce, show that there are various substances to which this term is applied, some being the wood of the root, others the wood of the stem.

This wood is probably the produce of Strychnos Colubrina, though occasionally it is procured from other species of Strychnos—especially S. Nux vomica.

According to the analysis of Pelletier and Caventou, this wood has the same contituents as the bean of St. Ignatius, though in different proportions. Thus it contains more fatty and colouring matters, much less strychnia, and, in the place of bassorine and starch, a larger quantity of woody fibre.

Its action, therefore, is precisely similar to the before-mentioned poisons.

Tanghin Poison.

From the kernel of the Tanghinia veneniflua or Cerbera Tanghin, a plant belonging to the family Apocynaceæ, is obtained the celebrated Tanghin poison. A single seed (which is not larger than an almond) is said to be sufficient to destroy twenty persons!! It is (or was) used in Madagascar to determine the guilt of suspected persons. Those who are able to withstand the ordeal (that is, those unaffected by the poison) are considered innocent, and vice versa.

CEREBRAL AFFECTIONS FROM DEFICIENCY OF CRANIUM.

To the Editor of the Medical Gazette.

Sir,

In the Medical and Physical Journal, published in London, for October, 1821, a paper has been written by Sir Gilbert Blane, on the efficacy of mechanical compression in certain cases of hydrocephalus. He says, " In reflecting on the circumstances which characterize the history and description of hydrocephalus, some of the chief of which are—that it is very seldom met with but in very early life, and most commonly in infancy, before the bregma is closed; that there is in most cases a preternatural size of the head; and that it is usually attended with a rachitic state of the bones, and a general scrofulous flaccidity of the soft parts, and runs in particular families—it occurred to me that the distension of the head and bregma is owing to a want of firmness and due resistance in the bony compages of the skull, which consequently yields to that effort of pressure with which the brain, in its growth, acts on its parietes. In reasoning further on the subject, it appeared to me conformable to some of the most approved principles of physiology, that, as there is a certain degree of tension and pressure necessary to the sound condition and action of parts, the withdrawing of this, by inviting afflux and congestion, produces serous effusion; and for the like reason there may be a deficiency of that interstitial absorption upon which the healthy state of this and all other parts of the living frame depends." Sir G. Blane relates one well-marked case, shewing its advantages. Probably the following surgical case, in which a large portion of the bony scalp was deficient, may tend to support the above doctrine, as I could assign no other cause of death but the want of the bony support to the encephalon.

George Patterson, aged five years and three months, received a fracture of the upper and posterior part of the left side of the os frontis, and anterior edge of the parietales adjoining, which exfoliated, leaving an aperture in the bony structure three inches by two inches in size. The wound healed; he remained well till the age of thirteen, after which he became subject to epileptic fits, which returned at times, increasing in severity till the age of sixteen, when they would put on every symptom of compression of the brain, till at last he would lie in a state of complete insensibility, with stertorous breathing, for seventy hours at a time. Treatment consisting of general and local bleeding, mercurials, arsenic, antispasmodics, quinine, counter-irritation through the skin and stomach, by means of ant. tart., all proved unavailing, till death terminated his sufferings Oct. 17, 1831, at the age of seventeen years.

Autopsy, ten hours after death.—On viewing the body, the only external defect was in the integuments of the back part of the scalp and ears, which were of a livid colour. On dissecting the integuments off the head there was extravasation of blood, with the appearance of contusion on the back part of the skull, opposite the ridge of the occipital bone. On removing the calvarium the dura mater adhered closely throughout, but was perfectly healthy; it was wanting over the original wound, the coverings of which were as follows—integument, tunica arachnoides, and pia mater. The sinuses were gorged with venous blood, also the veins leading to them presenting an unusual size. The tunica arachnoides healthy; the convolutions of the hemispheres of the brain were flattened; in the ventricles was found a small quantity of a sero-sanguineous fluid; the cortical and medullary substances of the cerebrum and cerebellum firm, without any infiltration. The thoracic and abdominal viscera presented every appearance of health. The mind, or intellectual constitution, was rather of a superior order than otherwise; memory strong. He was amiable in his disposition; fond of horse exercise and shooting; very lively between the paroxysms, which interval sometimes lasted three months.

It might be asked, why was he not subject to epilepsy between the time of the accident and the commencement of them, at thirteen years of age? On inquiry I learned, from the time the wound healed over till he was thirteen, he wore a metallic plate, secured on

with a tight bandage, thereby making artificial pressure.

Should you consider the above worthy of insertion in the MEDICAL GAZETTE, I shall feel obliged by your giving it publicity; and remain, sir,

Yours most respectfully,
JOHN GRANTHAM.

Crayford, Kent,
Dec. 21, 1836.

HOMŒOPATHIC DOSES.

DO THE HOMŒOPATHS COMPREHEND THEM?

To the Editor of the Medical Gazette.

SIR,

THE annexed extracts from a letter received from a clerical friend, to whom I had lent Hahnemann's and Quin's books on Homœopathy, amused, and at first certainly somewhat startled me, until I had gone through one or two of the calculations and verified their accuracy.

I have never before seen the extreme absurdity of homœopathic doses so clearly demonstrated; and could you find room for their insertion in your valued periodical, you will oblige, sir,

Your obedient servant,
THOS. H. SMITH.

St. Mary Cray, Kent,
Dec. 22, 1836.

"Many thanks for the books on Homœopathy. I have read them attentively: the result has amused me, as it may amuse you also. The point to which I will first allude is the excessively minute quantities in which the homœopathists profess to administer their medicines. A physician of our acquaintance, as he was laughing at these small doses a few days ago, observed that it was like throwing a grain of an active medicine into the Thames. He meant to exaggerate, but he in fact, as I shall presently shew, *enormously underrated the degree of attenuation:* Two decillionth parts of a grain is a favourite homœopathic dose. Now trillions and decillions are very pretty words, to which, however, we can affix no definite or even approximate idea; we are not aware how the powers of numbers mount up, unless we have occasion to apply our minds to a close and accurate investigation of them. When we talk of a decillion, we know we are naming a number which consists of an unit with sixty cyphers in its train; but if we would form any sort of notion of its magnitude, we can only reach it by taking some enormous intermediate integer.

The diameter of the earth is about 8000 miles; the solid contents of spheres vary as the cube of their respective diameters. The population of the world has been calculated at about eight hundred millions; and a homœopathic dose of opium amounts to two decillionth parts of a grain. Upon these data we proceed. From one grain of opium abrade an atomic particle which shall bear the same proportion to the whole grain, that a spherule one-thousandth part of an inch in diameter bears to the globe upon which we stand: divide this particle into homœopathic doses, and cause each individual on the face of the earth to swallow a dose every second, it will require twenty millions of years to take the particle described.

It will, I apprehend, be of little moment whether you administer opium in these ideal quantities, or distilled water, or—moonshine. If the Lord Mayor's orders respecting the provisions spoiled at the fire in Tooley-street were really carried into effect, there can be no porter brewer using Thames water who has not administered to every half-pint customer very alarming doses, homœopathically speaking, of the *arseniate of ham.* This should certainly be looked to.

But to our illustration above—Opium: it may be objected that it is really a powerful medicine: let us glance at some drug of milder properties. Capsicum I use to my boiled beef in formidable allopathic doses; let us see how Hahnemann administers it. This he attenuates to the ninth degree; that is, he would give a globule of sugar or spirit, which are his only vehicles, containing one-trillionth part of capsicum; *that is, one part of capsicum to one-trillion of the same parts of sugar.* Now suppose we wished to attenuate one grain of capsicum in this proportion, we should, of course, require one trillion grains of sugar. Will you tell me off-hand in what space, within a ship-

load or so, you might stow away a trillion grains of sugar? A West Indiaman of 600 tons is a very large West Indiaman indeed; if we freight ten thousand such ships, and let them each perform ten thousand voyages, there would still remain above half a million of such ships loads at Jamaica, out of the trillion grains. The calculation is simple enough, and my accuracy, therefore, is easily tested.

You seemed to fancy an illustration from the pyramids. The area of the great pyramid is 480,250 square feet, and its height 499 feet, call it 500; consequently its solid contents are

$$\frac{480{,}000 \times 500}{3}$$ or 80,041,666 cubic feet.

I have not at this moment the specific gravity of sugar, but that of pure spirit (the only other vehicle) I have. The weight of a cubic foot of spirit is 866 ounces: multiply this by 437½, you get 378,875 minims in the cubic foot; divide the trillion by this number, and the result is, that you have above two and a half billions of cubic feet in a trillion of minims; extract the cube root, the result is 13,750 in feet, which will be the length of each side of a cubical vessel which will hold a trillion of grains of pure spirit,—that must be above two miles and a half long, two miles and a half wide, and two miles and a half high; or, comparing it with the pyramids, *it would require above thirty-two thousand six hundred pyramids to contain spirit enough to dilute one grain of capsicum.* You will thus see that our friend would certainly poison the Thames with his drop of laudanum."

ON THE VIRTUES

OF

HYDRIODATE OF POTASS,

AS A REMEDIAL AGENT IN DISEASE.

By T. C. Hake, M.D.
Physician to the Brighton Dispensary.

Having selected the hydriodate of potass for internal administration in many diseases, I have been induced to embody my experience of its properties, without comparing it with the views of others, and to present it in the form of an essay.

I am in possession of at least one hundred notices of its internal use, during the last twelve months, at the dispensary. Although one-half of these has been dismissed without comment, there is not one but has either confirmed my general knowledge of this substance, or caused it to be directed into new channels of research.

The diseases in which I have seen its efficacy proved are principally those of tegumentary membranes, whether affected in their functions or organization; and of the fibrous tissues; and its virtues depend on a tonic and stimulant power.

As a remedy acts through fixed laws, and is unable to adapt itself to the circumstances of its administration, it is the latter which we are constantly considering after our ideas of the former are made perfect; and through these that we are to extend our knowledge. A stimulant, for example, increases action; but it is whatever kind of action may exist at the time of its application, whether an inflammatory, irritable, or merely debilitated action; therefore our first object is to ascertain which of these states is present, and to convert one into another, according to the end we would accomplish, and the peculiar state of system on which we are desirous to practice.

In many disorders in which final advantage may be anticipated from the hydriodate of potass, there are states of the system which forbid its use. It cannot be given in the acute stages of rheumatism, because of the febrile symptoms; but directed with skill to certain varieties of the chronic, it is a specific. This distinction arises also in acute and chronic diseases of the skin; and in disorders where there may be no excitement of the system, although there exist local irritation of the stomach or intestinal canal, this abnormal state will suffer aggravation instead of tone being directed to the system, or relief to the disease.

The hydriodate of potass, when internally exhibited, may perform the office of a tonic, the circumstances attendant on its exhibition being adapted to this kind of action. If, for instance, the mucous tissues be in a debilitated state,

it will elevate them to their natural tone, and will afterwards, if pursued, assert its influence as a stimulant over distant organs, or the one to which its action may have been directed by superior art.

If the tegumentary membrane of the stomach suffer irritation through inevitable sympathy with disease, so as to be irreducible beyond a limited extent so long as the cause exists, it should be antagonized by counter-irritants, such as henbane, hemlock, lettuce, and the like, according to their degrees of applicability, at the same time that the hydriodate of potass is given. Then the prime remedy will often act as if there were no irritation.

The hydriodate of potass has a power over the liver similar to that of mercury and colchicum, but milder; and this power is based on a stimulation which it sets up in the duodenum. By what law is this effected? The question might be responded to by an analogy the most perfect, and with undeviating confidence, but that there are invisible lovers of science*, who, interfering in what they are intended by nature not to understand, the limits of their reason being assigned, are doomed in their narrow sphere to consider hypothesis as inimical to philosophy. Still it may be stated why the stimulation of hydriodate of potass in the duodenum, like that of mercury, colchicum, and other agents, is productive of a flow of bile. It is by an admirable deception of nature!

When the chyme escapes from the stomach into the duodenum, it performs its part as the only natural stimulant of the intestine, and successfully solicits bile. But when, in the absence of chyme, artificial stimulants are resorted to, the biliary apparatus, unintelligent, still obeys the call, and there is an evacuation of gall greater or less in proportion to the degree of stimulation above or below that of nature, and according as the stimulus of chyme is similated by the artificial agent employed.

The hydriodate of potass mildly similates the power exerted over the liver by chyme.

And in what manner does this agent affect the intestines as it passes through their channel?

The hydriodate of potass stimulates the lacteals, and thus similates the action of chyle. Unendowed with intelligence, acting only through fixed laws, to them the stimulant is sufficient, and they are prepared to absorb. But though excited, they find no chyle,—it is the hydriodate of potass; and this they refuse to imbibe. Thus a very important result is obtained—the effort of absorption without the act; important, indeed, in mesenteric disease, where the functions are deeply compromised, but where exercise of organization may thus be incited.

Here it may be well to propose a question—one of a somewhat subtle nature—whether this exercise of the lacteals, without a flow of chyle through their tubes, or, if the expression be adapted, this action on *vacuity*, has the same effect on the secretions as if actual absorption had occurred? Secretion is kept in a ratio with absorption by nervous sympathy; the increase or diminution of the one influences the other in like manner; therefore, since it is less the presence of absorbed fluids than the organic action which constitutes absorption, will not this artificial action of the *chyleless* lacteals produce an increased natural action of the secretions on the mucous surface?

The view which has been now suggested of a similating power exercised by medicinal bodies, is worthy of being further developed, and considered in relation to the degrees of deviation from the natural standard of stimulation—that exercised by chyme and chyle, according to the agents employed. By the observation of our daily habits, we are informed of the stimulating power of almost all foreign bodies on the salivary glands; and although the intestinal structure and its dependencies are beyond our view, the analogy is perfectly extensible to them, and enables us, by a correct process of ratiocination, to assume that as the action of chyme is, so is that of mercury, on the liver; that those bodies whose action is on the lacteals have the same effect as chyle on those organs; and that these various actions on the same apparatus differ only in degree.

An instance which I witnessed may be here adduced to demonstrate the

* Vide the letter, "Z.," in the MEDICAL GAZETTE for Dec. 17.

similarity of action possessed by hydriodate of potass and mercury on the living body. A female had taken half a grain of calomel night and morning, in the form of Plummer's pill, and discontinued the medicine after a short period, without constitutional disorder having supervened. The hydriodate of potass succeeded its use, and in a few days induced salivation. But in another instance, swelling of the glands having been too suddenly attributed to hydriodate of potass, inasmuch as the tumefaction subsided under its continued administration, it was thought proper, in the former case, to continue the medicine; but salivation rapidly increased, and was alleviated only when the hydriodate was withheld.

A metastasis of the tonic and stimulant action of hydriodate of potass to various organs may result from its continued administration. The stomach, probably the œsophagus, as well as the intestines, may be made subservient to the transmission of its effects. In these parts the local action must be stimulant before new power can be imparted through them to tissues which are remote, and connected less, if at all, by continuity, than by a medium of nervous fibres. In thickening of structure, such as is found in the mucous tegument of bronchial tubes, there is a certain degree of atony; that is, the circulation in the part is retarded by the condensed state of the tissue, and there is little advance made by its absorbent and excretory vessels. In this dilemma the stimulus of hydriodate of potass, urged from the stomach to the bronchial membrane, is not at first stimulant at its final destination, but tonic; nor until a higher vitality becomes established, is a stimulation induced in the thickened structure. This, however, being once accomplished, that is, the action of natural tonicity being exceeded, the absorbents will begin their task of carrying off the superabundant particles which constitute thickening; secretion follows; the blood is freely oxygenized, and the function of animal temperature restored.

And by what means are the absorbents thus induced to act? Before, unable to restore the condensed tissue to a normal state, they became insensible to the stimulus of particles which it should have been their first duty to release from organic relations; an artificial stimulus renews their tone,—they experience extraordinary power. Organic particles, bordering on the transition state from solid to fluid, are the stimuli of absorbents attached to tissues for their gradual removal; the hydriodate of potass similates through nervous media those stimuli; the exercise of the absorbents gives these vessels strength, which, if at first ineffectual, is finally sufficient to break down the organization, and convey the detritus into the circulation.

Thus is established a new confirmation of the truth, that medicine in its successful action is an imitator of nature, the stimulus of the substance in question on the absorbents being similar in kind, although not in degree, to that of solid particles about to be removed by them from a healthy tissue. In the same way as it acts on the duodenum with a power like that of chyme, and deceives the intestines with a chyle-like action, it similates the natural stimuli of absorbent vessels.

But what is to be brought forward hereafter as a principal means of curing certain diseases with the hydriodate of potass, may be here alluded to as accessory to its constitutional effects,—the power of carrying off bile from the system, and by opening the duct, of causing a free passage for the elements of diseased structure which the absorbents may have added to the blood.

By tracing the symptoms which hydriodate of potass produces on a living body, we are only tracing the direction and distribution of nervous fibres, and determining, by the simplest process of discovery, the manner in which it acts. For instance, in hysterical subjects, instead of fulfilling, as intended, any particular indication, it will act as soon as swallowed on the stomachic, and probably the œsophageal branches of the pneumo-gastric nerve; and spending its power on the superior laryngeal and the adjacent nerves, produce globus hystericus, which will continue sometimes for several hours.

Moreover, in tracing these symptoms in comparison with the disease existing, we obtain a still higher confirmation of the truth. A person with enlarged prostate, having taken hydriodate of potass, felt, after a reasonable time, a constant and plunging pain in the sacrum. An occasional pain then ex-

tended along the line of the perineum, striking the prostate, and the extremity of the penis and rectum. Again, the bearing-down pains and others connected with the uterus which are attended by pain in the sacrum, may be removed by hydriodate of potass.

These two instances show that the branches of the hypogastric plexus and sacral nerves which are distributed at the colon and rectum may equally be attacked in those parts by an hydriodate, with a view to the relief of diseases which are under the control of its final distribution.

And the manner in which the indication is fulfilled is this:—A pain in the spinal cord is expressive of increased action, which art or nature may produce. In either case the new energy is given to nerves proceeding from the seat of excitation to its disordered viscus, to establish in the latter a process of cure. The hydriodate of potass, stimulating the spine through the nerves which acknowledge its source, and at the same time acting in like manner on the hypogastric plexus, the two-fold effect is conveyed to the terminations of the united nerves.

In the first of these cases, that of diseased prostate, the action is set up; in the second it is made complete.

It is the desire of the author to illustrate these theories by the cases on which they are founded, in a succeeding paper.

CORRECTION OF AN ERROR IN THE NEW PHARMACOPŒIA.

To the Editor of the Medical Gazette.

Sir,

May I beg that you will insert, in the next number of your journal, the following correction of a very palpable error in the formula for the extemporaneous preparation of hydrocyanic acid, introduced into the new edition of the Pharmacopœia Londinensis? I am indebted for its detection to Mr. Thomas Henry, operative chemist, of Great Ormond-street.—I am, sir,

Your obedient servant,

C. H.

Dec. 24, 1836.

In 8vo. p. 50, l. 21,—in 32mo. p. 61, l. 9:—*pro* granis novem cum semisse, *lege* gr. 48·5.

In 8vo. p. 50, ll. 22, 3,—in 32mo. p. 61, l. 11:—*pro* Acidi Hydrochlorici diluti minimis novem, *lege* Acidi Hydrochlorici gr. 39·5.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

A Practical Treatise on the Management and Diseases of Children. By R. T. Evanson, M.D., and H. Maunsell, M.D., Professors in the Royal College of Surgeons, Dublin.

The lack of good scientific books on children's diseases in this country, has long been felt by practitioners, young and old, and might well have formed a ground of reproach to British medicine, if there were not other topics fully as strong, and probably more obvious, to be urged by our continental brethren. Both in France and Germany, great attention has been paid to the subject, and in the latter country there are periodical works regularly established for the publication of papers on the diseases of infants, and their proper modes of treatment. Two of these we announced not long since, among our notices of recent German works. But we hope, nay, we think there are symptoms of it, that this unseemly defect in our medical literature will be gradually supplied. The volume before us is more than an earnest of a better order of things.

The authors have had ample opportunity of acquiring experience on the subject about which they have written, and, as it seems to us, they have profited by the occasion. Their book bears intrinsic evidence of the fruits of careful observation; it is judiciously and skilfully drawn up, and exhibits the joint production of the fellow-labourers in a very attractive light.

Dr. Evanson treats of the peculiarities of the infant structure and constitution, of infant pathology and therapeutics, of the diseases of the digestive organs and the brain, &c.; while Dr. Maunsell considers the physical education of infants, the accidents and diseases peculiar to new-born children, diseases of the respiratory organs, vacci-

nation, eruptive fevers, and constitutional diseases occurring during the infantile period.

It will be seen that the range of topics is extensive: we can safely add, that it is wrought out diligently in every part. The volume is compendious, but it must not be confounded with those Mothers' Guides and Nursery Treasures which make their mischievous, or at least good-for-nothing, appearance from time to time. It aspires to a scientific character, and we doubt not will be found useful by all who have to grapple with the difficulties of practice.

A Description of the Bones, for Students in Anatomy. By J. F. South, Assistant-Surgeon to St. Thomas's Hospital. Third edition.

This new edition is rendered far superior to its predecessors, by being richly illustrated with wood engravings intermixed with the letter-press. We think it must be one of the best manuals of osteology for the student.

MEDICAL GAZETTE.

Saturday, December 31, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE *CORPS D'ELITE* OF THE NEW UNIVERSITY.

We last week pointed out our objections to one of the most conspicuous principles of the new University — namely, that which places all education under the control of the Minister,— an arrangement the more extraordinary coming from an administration who found their claims to public favour on the ultra-liberality of their politics. Next to this most un-English regulation, the worst feature is the spirit of monopoly already evinced, and we may add, the injustice displayed, towards many existing schools, — two only being named in the charter, although the right of others to a like distinction was admitted in certain speeches, which, though possibly forgotten by the orators, are — thanks to Hansard — not lost to the world.

True, we are told that other establishments may be added hereafter; but why was this not done at once? Why is an equality in this respect not given to all who equally deserve it? Why are others to sue, cap in hand, for that which is conceded without question to two institutions? The answer is quite obvious: to favour that establishment, which enjoys the patronage of the government. But it may, perhaps, be said, the ministers did not know of any other schools worthy to be so honoured. Now our business is with medicine; and we say in reply, that, with regard to our profession, they *did* know of others; that they *were* aware of the existence of numerous medical schools as good as those selected; and that this knowledge resulted from their having put the teachers in those schools to an immense deal of trouble, and to the expense of 450*l.*, to make good their rights before the Privy Council. In words and speeches the ministers at length acknowledged those rights, — and acknowledged only to disregard them. When Mr. Tooke made a motion, praying his Majesty to bestow a charter on University College, Lord John Russell, in his place in the House of Commons, observed, that "he (Lord John Russell) had been present at that Council. * * * The great objection appeared to him, and he believed all the Council thought so, to be not so much on the part of the two Universities, as on the part of the medical schools of London, and he thought that the other schools of London would be entitled to confer medical degrees, if that power was given to the University of London*." Such were the words then

* Hansard, Vol. xvii. p. 292.

used by the Secretary of State for the Home Department; and we leave it for our readers to judge how far they are consistent with the omission from the charter of every one of the medical schools whose merits he thus acknowledged.

It is necessary to lay down certain regulations as to the period and manner of study suited to the average capabilities of human intellect; and it is proper to take care that the means requisite for acquiring knowledge shall have been enjoyed; but beyond this all should be free and uncontrolled. Certain of the larger and more influential schools of medicine, as a matter of course, will be admitted, were it only for the sake of decency; but with some not less deserving it will probably be otherwise; and thus a most objectionable system of preference and patronage take the place of free and open competition.

Again: of the men chosen to carry this compound of radicalism and oppression into the walks of science, we remarked last week, that all we could say of them (with a few exceptions) was, that they were *respectable;* and we cannot, on reflection, find any epithet more applicable to their general standard of scientific or professional acquirement. With regard to some of the appointments, we are not aware that any rational explanation can be offered: the parties may thank their stars, and say with Malvolio, "Well, 'tis Jove's doing;" or they may perhaps remark, on the same authority, that "some are born to greatness."

Several of the nominations, however, are very easily accounted for. We have four or five physicians who entailed a debt of gratitude on the Chairman of the Medical Parliamentary Committee, by the unmitigated bitterness of the evidence they gave against their own College; at least if this be not the cause of their selection, we confess ourselves at a loss to offer any feasible conjecture on the subject. Here there is an obvious connexion between the cause and the effect; and this illustrates the second mode of advancement—for "some achieve greatness." One respected physician, holding a high professional office under government, we are assured became a "senator" upon compulsion, and another, the best known of all in the paths of science, had his name inserted without the preliminary courtesy of asking his permission! Nor is this a solitary case; and here we have illustrations of Malvolio's third mode of advancement—for "some have greatness thrust upon them."

We do not wish to say any thing wantonly to hurt the feelings of the gentlemen in this department, but the plain truth is, that there is not one pre-eminent man among them, and of the two or three who enjoy any distinction, this has been acquired in some other branch (as natural history, or natural philosophy), and not in the teaching or in the practice of their own profession.

But if the new University be weak in physic, what are we to say of the other departments? What names renowned in surgery are to grace the embryo diplomas? Who are the illustrious men who have been selected to counterbalance the fame of the College in Lincoln's-Inn? Let the profession hear, and mark it with admiration. They are Sir S. L. Hammick and Mr. Kiernan. The name of the former may possibly be known to our readers, as we announced his elevation to the baronetage a few years ago. An injudicious friend of this gentleman, who has written in defence of his appointment, tells us that he has performed the operation of amputation two hundred and eighty times! Without disputing the accuracy of an informant so intimately acquainted with the details, we take leave to ask him whether, if

Mr. Hammick had not happened to attend Lord Grey's family during their residence at Plymouth, it is probable that he would now have been either a baronet or a "senator," even if he had cut off the arms, as well as the legs, of the 280 persons whose limbs he amputated?

The name of the latter gentleman (Mr. Kiernan) cannot, we are sure, be forgotten, as that of an ingenious young anatomist, whose papers on the liver have deserved and reeeived our warm commendation; but whose name is yet wholly unknown in surgery.

And could no other surgeon be found, to give something like respectability to this department of the University — none to save it from mere mockery? In London there was none; no English surgeon, who had a name or reputation to lose, would hazard either; but Ireland had "our well-beloved Surgeon-General! Philip Crampton, Doctor in Laws." Did Mr. Crampton know that he was applied to as a *dernier ressort*, because all of his own rank here declined? Are his prospects in Dublin so reduced that he will come to London, on the strength of an appointment which none of his compeers here could be prevailed upon to accept; or is it the plan that he shall not be required to visit the metropolis, but have the diplomas sent to him like bills of exchange, for the benefit of his signature? We would strongly recommend this last arrangement, as the safest to be adopted; for though we readily admit that he is a distinguished surgeon, yet he may rest assured, nevertheless, that the "General of the Lancers*" is much better known in the Irish metropolis than here.

* The Surgeon-*General* is, or was, in the habit of going to the Lord Lieutenant's levees in a splendid military uniform. On one of these occasions, Lord Norbury, observing him pushing his way, with some difficulty, through the crowd, cried out, "Make way, there; make way for the *General of the Lancers*."

When a young man has been educated as a surgeon in London, and has passed the ordeal at Lincoln's-Inn Fields, he carries with him a document which commands respect, in whatever part of the civilized world his destinies may carry him. What is this owing to? Simply to the names attached to his diploma—to the signatures of Cooper and Brodie, of Lawrence and Travers, of Green, of Keate, of Guthrie, and others of scarcely inferior note. No proof of this is necessary, but we give the following anecdote, because it is a striking illustration of our argument.—In the early part of the present civil war in Spain, a young English surgeon presented himself in the Carlist army, then pent up among the mountains of Navarre. He was wholly unknown, and had no voucher of any kind but his surgical diploma. Zumalacarreguy saw the name "Astley Paston Cooper" attached to it, and appointed him without further inquiry to be a surgeon on his staff. We should like to know if the whole list of Senators of the new University, from Lord Burlington downwards, would have done as much for him?

But there is yet another branch in the medical department of the University: Messrs. Bacot and Ridout, two of the examiners at Apothecaries' Hall, are Fellows and fellow "Senators." We attribute their nomination to a piece of skilful generalship on the part of Mr. Warburton. The Colleges of Physicians and Surgeons would not be seduced; but we understand that he flattered the Apothecaries into acquiescence. The gentlemen above named are wise, too, in their generation; for if the University succeed, their former occupation will be gone; and if it fail, they have only to retreat again to their brethren at Blackfriars. But for the other members of the Worshipful Society, what are *they* about?—are they drugged

with their own opium, not to perceive that the success of the University must be their destruction? The College of Physicians has some *prestige*—the College of Surgeons some reputation; both have the magic of a name to support them; but what have they of the "Hall" to trust to? If their chairman and most *redoubted* examiner concur in conferring diplomas at another Board, which carry with them the Doctorate, who, think they, will apply to them for an *un*titled license?

As three surgeons were appointed, so also were there three general practitioners; the third being no less a person than the fashionable apothecary who attends the present Premier and several of his colleagues. Mr. Pennington ——; but he has had the good sense to direct that his name may be withdrawn.

We have neither heard of, nor can discover, in the selection of the "Senators," any one avowed or ostensible principle which is not violated. Thus the absence of the names of those best fitted for the task of Examiners is attributed to a determination to admit no one actually engaged in teaching; and this with a view of securing impartiality. Yet Mr. Faraday teaches at one school, and Mr. Brande at two! Again, the same motive is assigned for the exclusion of those connected with hospitals; but to this an exception is made in favour of Dr. Billing,—for what reason, does not appear on the record. In fact, the only principle consistently followed out is that of placing on the senate the greatest possible number of persons connected with University College, Gower-Street,—and this also, doubtless, with the view of securing impartiality.

Neither are the blunders which have been made in the names and designations of the members of the Senate less remarkable. Several of them are wrong spelt; two Fellows of the College of Physicians are robbed of that distinction, while it is bestowed on two others to whom it does not belong; nay, in one instance a surgeon is mistaken for a physician, and assigned to the wrong College; although it is now in evidence that he has amputated more limbs than the Body in question has members. In fact, it is difficult, in reading over the names, to say which is most calculated to excite admiration—the excellence of the selection, the correctness of the designations, or the felicity of the orthography.

Here, then, we enter our protest. Nothing would have given us more gratification than to have seen a medical institution on really liberal principles, by which the *summi honores* should have been open to all, without the necessity of leaving the metropolis. But the new University is only calculated to remove the distinctions in the profession, by "levelling downwards." It is an embodying of the "One Faculty" chimera, by which all grades are to be done away, and consequently the chief motive to exertion destroyed. It is a blind and stupid confounding of the aristocracy of intellect with aristocracy of birth; as if the same reasoning applied to each;—and so far as its influence may extend, it is to secure to mediocrity the same rank as to the highest attainments. It is to throw down the torch of discord between the existing corporate bodies and the new—between the alumni of the one and the graduates of the other. And while in principle it combines democratic professions with an arbitrary subjection of science to political power, it establishes a system calculated to ruin many of those now engaged in teaching, and to give a shock to the whole fabric of education in this country, the effects of which years may not be sufficient to undo.

TREATMENT OF MEDICAL WITNESSES UNDER "WAKLEY'S ACT."

We have not room this week for any remarks on the subject to which the following letter relates, but shall take an early opportunity of placing in its true light the conduct both of Wakley and his "very obedient servant," the coroner of Yarmouth. Meantime Mr Aldred must not be prevented from expressing his opinion of the worthy pair.

To the Editor of the Medical Gazette.

Sir,

A letter appeared in the Lancet of last week, from Mr. Ferrier, the Coroner of Yarmouth, attempting to explain his conduct. I shall take no notice of any of his insinuations, but will pledge myself *to prove the correctness of my statements, and the falsehood of his*, provided mine are denied by any person upon whose word I can place the slightest reliance; but it would be like fighting with a shadow to reply to any thing said or written by such a person. As to his malignant observations upon my lithotomy case, I have merely to observe, that I acted by the advice of much better and more experienced surgeons than Mr. Ferrier (who, by the by, has only been in practice seven years longer than the person he designates the *very young practitioner*). Before concluding, I beg to assure Mr. Wakley that he may vent his low abuse and slang upon me as long as he likes, as I consider his character as much upon a par with that of his correspondent Mr. Ferrier.—I remain, sir,

Your obedient servant,
Chas. C. Aldred.

Yarmouth, Norfolk,
Dec. 26, 1836.

CLINICAL LECTURE,

Delivered at St. George's Hospital, December 16, 1836,

By Dr. Seymour.

ORGANIC DISEASE OF THE STOMACH.

There are not many cases in the hospital at present respecting which I wish to address you; I will, however, notice one or two—one in particular, because I spoke of it in the second of this course of lectures, and it has issued precisely in the manner which I expected it would do when we first considered it.

It is the case of a man named Wilson, and you may remember that I spoke of him as labouring under organic disease of the stomach*. I told you that there was a tumor situated midway between the umbilicus and the superior anterior spine of the ilium, on the left side. I mentioned that we not unfrequently found the stomach pushed down in this direction, and the pylorus being thickened externally, it gave the appearance of a tumor. After a little time the pain which this man suffered in the tumor was greatly relieved by the application of leeches, and subsequently it disappeared altogether. This led some gentlemen to doubt how far the diagnosis was a just one; but the man's appearance, the water-brash, and the certainty of the tumor in the first instance, always made me feel satisfied that the complaint still remained. The fact is, he lay in or on the bed for some successive weeks, and the tumor not adhering to the parietes of the abdomen, the stomach changed its position, and the tumor disappeared.

For a short time he was so well, that I thought it very likely that he would not remain much longer in the hospital. All the symptoms were quiet until the 28th of last month, when he began to be attacked with a very remarkable kind of fever, a fever evidently denoting that suppuration was going on in some internal organ. There was a violent accession of heat; shivering followed by heat, and sweating to a very great degree; and as this diminished, there were all the symptoms of that great disturbance of function which is termed *typhus fever—low fever*. There was a dry dark tongue, subsultus tendinum, especially in the muscles of the face, and occasional vomiting. It was quite obvious that this was a token of a very considerable degree of disturbance going on in the system, and of the internal disease having taken on some accession.

When this had continued about a week he died; and, upon opening the body, we found that about one inch above the pylorus was a tumor about the size of a pigeon's egg, and which was attached to the coats of the stomach. The coats of the stomach around that part were greatly thickened, and in one portion were so accumulated as to contain, in a depression

* Vide Medical Gazette, No. 465, p. 151.

formed by the thickened coats, a space about sufficient to enable you to place in it a walnut. In addition to this, a tumor of the same kind was seen attached to the cellular membrane of the pancreas, which, upon being cut into, was soft, as if it were undergoing an operation similar to suppuration. A part of this which was still hard presented a melanotic appearance, shewing evidently the malignant and cancerous nature of the disease. I have no doubt, from the changes which took place in the large tumor, that during life it was the size of a hen's egg. This cause gave rise to a set of symptoms which would have been called, if no internal disease had been visible, a case of *typhus fever*. You are to remember that the same symptoms would have been set up from inflammation of the brain, from inflammation and ulceration of the bladder, from inflammation and rapid ulceration of the small intestines, or any other rapid lesion of an internal structure, the due performance of the functions of which is necessary to life.

HYSTERIA.

The next case respecting which I mean to speak, and which I shall take an opportunity of doing in this lecture, is that of VAUGHAN, who came in labouring under rheumatism*. Subsequently to her getting well of that complaint she had a violent attack of that form of disease termed *hysteria*. Even when she was cured of the rheumatism the nervous system was in a state so easily admitting of being disturbed, that it was quite impossible to send the poor woman back to her labour; at the same time there was no great disease—certainly no disease of structure; nothing but a general derangement of function remaining. This case will lead me to speak of hysteria in general.

It is of great importance in a practical point of view, to know the real disease from that which may be called, under particular circumstances, the *simulated* disease. Everybody knows what an hysterical fit is. The patient complains of something rising up into the throat like a ball, which cannot be swallowed; this is usually followed by a convulsive motion of the muscles, often of the trunk and of the face, accompanied with laughing, crying, screaming, and violent efforts to swallow at the same time, but always an alternation of crying and laughing. This is termed an *hysterical paroxysm*. Nothing can be more common than this; but you are not to suppose that hysteria stops here.

One of the great masters of our art, Sydenham, who once enjoyed considerable practice, and who still possesses great reputation in the medical world, says that the changes of this particular disease are more variable than the hues of the chameleon. But it sometimes takes on, or simulates, all the appearances of inflammatory disease in different viscera of the body. It not only does this, but it gives rise to a train of symptoms, or mental disorder as it may be called, which leads the patient to practise imposition. I know nothing more difficult, or more necessary, than to endeavour to distinguish between these two diseases, because in the one case you may do a great deal of good, and in the other you may really kill the patient—by overlooking a real inflammatory state, on the one hand, or taking an hysterical state for inflammation, on the other.

I stated that every one knows what an hysterical fit is; but there is another set of symptoms which accompanies this condition of the body. There may be pain over one eye, and you can cover the part affected with your finger; this is termed *clavus hystericus*. Sometimes there is pain in the hypochondriæ, but it most frequently occurs on the left side; and hence it has been supposed to arise from the vapours of the spleen, especially if in such circumstances the patient is low-spirited and fantastical. You will find it spoken of in books, and you will hear persons talk, as if the patient were labouring under vapours of the spleen—a sort of hysterical condition. But although the pain is a most remarkable symptom, it may be doubted whether it arises from that source. Patients are often troubled with flatulence; and some persons believe that where the left hypochondrium is affected, it arises from wind in the stomach; and where the right hypochondrium suffers, that the wind is collected in the upper part of the abdomen. In either case, however, it is simply a symptom, and is to be taken together with the other symptoms of the complaint. I do assure you, that scarcely a week elapses in which I do not see cases where these symptoms have been treated as symptoms of acute disease. Because acute inflammation of the liver, or the spleen, is laid down in books as productive of pain in the right or left hypochondrium, increased on pressure, and because the patient in hysteria complains of pain increased on pressure, it is therefore concluded that she labours under one of the former complaints. But in hysteria

* Vide MEDICAL GAZETTE, No. 464, p. 117.

the pain is so increased, that no inflammation except the acutest form could give rise to so much suffering when she is touched. The patient's health is sometimes not affected, or if affected, it is in a dilapidated condition. In general, though not always, the menstrual discharge is irregular; it is too much, or, which occurs more frequently, too little; or it does not take place at the natural periods. You have, then, this second form of the disease.

But hysterical paroxysms will come on in such a condition of the body as this, of the most alarming kind. The patient will be for hours together with the back bent, as in opisthotonos, with the teeth clenched, and the hands and fingers drawn in. At other times there will be great difficulty of swallowing, and at others great difficulty in passing water; and this is very commonly the case in hysterical women.

The next form of the disease is where the mind seems to be still more affected than the body, with this general derangement and nervous sensation. The patient will try to persuade the practitioner that she has real disease. Hence the cases which occur of sand and gravel being presented as having been passed from the bladder, such sand and gravel as you know could not originate in an animal body; very different secretions from what take place there. At other times stones, and even *flint* stones, are shewn, and are said to have been passed from the bladder. Such cases, although I do not mean to say that they are the most common things in the world, are by no means uncommon. There is scarcely a physician of any practice in this town who has not seen cases of this kind. At other times the patient will eat nothing. I saw a young lady who for several months had taken nothing but half a cupful of tea two or three times a day, and in this condition there were hysterical fits almost amounting to epilepsy.

You have, therefore, in the treatment of this disease a great deal to which to attend. In the first place, knowing as you do that a great number of these cases are simulated, you are to be firm in your treatment, not to be biassed on one side or the other by persons coming and giving you their advice. You have at the same time to be very firm with the patient; but take care that you do not disgust her by laughing at her, or ridiculing her, for she will in that case imagine that you cannot cure the disease, and she will send for some one else who is more credulous or patient. You must hold a tight rein, insisting upon that being done which is necessary, and stating to the family that in the end the patient will recover if such means be put in practice. But it often requires a very great deal of care and attention in order to effect this. Sometimes there is even vomiting of blood: this occurs in this very patient. There is sometimes hysterical palsy in the lower extremities. I saw a case of hysterical palsy which occurred in a servant. She had been very laboriously exercised, her health had given way, and she had palsy of the lower extremities. She had been bled four times, and had had on eleven blisters. When I saw her there was a want of due circulation, blisters arose on her extremities, her back sloughed, and she died in consequence of it. Now this was not an imaginary case. I will tell you one instance which occurred lately, and where the treatment was successful, and therefore it is a much more important case. A very young lady, and of uncommonly active appearance, had three or four years ago a fall from a horse. It was said that she sustained concussion of the brain. I mention this to show that the case was complicated. She had been well for three years, and the blow might have been forgotten, as if it had not happened. Latterly, however, she had become exceedingly ill: there was pain in the head, pain in the back, globus hystericus, and towards the evening there came on a violent fit, resembling very much something between epilepsy and hysteria. She was abroad at the time. She was cupped, bled, put on a course of mercury, and had moxæ applied all down the spine. She was then brought to England that a physician might attend her here, and she came to town. I have seen her for three hours bent like an arch, with her feet behind, her hands clenched, her teeth shut, exhibiting the strongest instance of what is called *tonic* spasm which I ever saw in my life, as bad as you see represented in pictures of tetanus. Yet all this went off with the hysterical fit: it was neither more nor less than hysteria. On one occasion I was sent for to see her, and I did what I cannot recommend you to do: disregarding inconvenience altogether, I poured pail after pail of water upon her as she lay on the bed, and then forced her to drink a large quantity of sal volatile. Then came the trial of getting her to take food; for the patient always sets herself against it: it is not that she cannot take it, but she will not. She was then ordered a drachm of asafœtida, an ounce of lime water, and half an ounce of pimento water, to be given two or three times a day. It is exceedingly nasty, no doubt, but it has an effect of which you

really have no idea. This patient was given a combination of conium and galbanum as well as asafœtida. By degrees she got better, the paroxysm which used to come on at six o'clock in the afternoon went off, and then came a spasmodic shutting of the eyelids. That likewise left her, and then she was able to stand. But I should tell you that when the case was first brought to England the whole of the lower extremities had entirely lost their motion, and very nearly their sensation. This, combined with the fact of the blow, the cupping, and the application to the spine of such an abundance of blisters and moxæ, would render the case very complex. Still, from the circumstance of the patient's general appearance and good health, with her quietness when not in a paroxysm, her age, and the irregularity of the uterine discharge, I entertained no doubt of her condition, and the young lady is now perfectly well. Before she went out of town I requested that Sir B. Brodie might see her, because, if there should be any return, persons might persuade her friends—and they might be themselves mistaken—that she was suffering from disease of the spine. He accordingly examined the spine, and it was in a perfectly good condition; but at the same time the appearance of the scars on this part of the body, which had been produced by the severe treatment she suffered abroad, was quite extraordinary. I have not the least hesitation in saying that every one of the measures adopted was unnecessary,—that every one aggravated the disease, so that she nearly fell a victim to them. Hence you see the great necessity of understanding well what may be called *apparent* disease, in contradistinction from that which arises from a *real* affection. Unfortunately the patient often has pain in the right or left hypochondrium; and when it occurs on the right side, it has been called *hypochondrialgia.* This pain, if it were really arising from an inflammatory condition of the structures, would be attended with a febrile pulse, with a foul tongue, with great disturbance, and great depression of strength; but it is not attended with any one of these symptoms; and though the tongue may be more or less white, and the pulse weak, yet the patient bears the application of pressure, and has her usual appearance.

Sometimes the disease affects the breast in such a way as to cause it to be tumid. I saw myself a young married woman, who had no family, who, at every period of the menstrual discharge, had such violent pain in the breast, and such violent hysterical fits, that it was sometimes thought that she would not survive the night. This was entirely cured by asafœtida. There was a case in the hospital, some years ago, of a woman named Osmond, who made a great deal of noise in the world. She had been in love, and was in a disposition of mind disposing her to an hysterical diathesis. It was said that she had taken laudanum, but I could not make that out. When she was brought into the house she was paralytic in the lower extremities, and remained so for some months. None of the ordinary remedies were of any use in removing the palsy,—neither bleeding nor blistering, nor any kind of counter-irritation. They were tried, but in vain, because I did not then know that the disease went to such an extent as to simulate so severe a complaint as actual palsy of the lower extremities. At length I put her on asafœtida, and asafœtida alone; I gave it her at night in pills, and in mixture by day, and kept her quiet. By degrees she began to recover the use of her limbs, and I then ordered the shower-bath, which is an exceedingly useful adjunct in this complaint, and she recovered. She went out of the hospital; she has since married and borne two children, and has never had any return of the disease. There was another case which made a great noise some years ago, of a young lady who could not swallow any thing in consequence of a sort of spasmodic action. A number of observations were published on the case. She recovered by the constant use of cold affusion, pouring cold water upon her—(and such cases, in point of fact, you frequently meet with)—followed by rubbing in a drachm of belladonna every two hours, and lin. camphoræ compositum. You will remember a woman in Roseberry Ward, with an hysterical affection, which caused her to walk on one side, to whom we applied this remedy, and who got manifestly better. She had not been long in the hospital when she went out, having been in one hospital before. I believe she went out because she was getting better, and we were controling the disease. It was not quite her cue to get well, and I have no doubt she would go to another hospital.

The most extraordinary part of this business is the imposition which females will practise in such circumstances. There was a woman in the hospital who had constant vomiting, but there were none of the symptoms usually accompanying it—no real disease of the stomach, no real disease of the brain, and no real disease of the lungs; and yet she vomited every thing she took. I had her very narrowly

watched, and it was found that her friends brought her opium, which she took in order to produce this vomiting, and to excite my surprise. This was a case purely of imposition. In private life you will meet with persons who under other circumstances would disdain a falsehood or imposition, who will practise similar deceptions. I attended a boy, who took opium mixed with something else, to produce apparent violent spasmodic vomiting during the day.

What are we to call the state of mind under which the patient labours when it goes to this extent? It would be called *maniacal;* and yet it certainly depends upon that irregular condition of the nervous system of which I have been speaking.

This great peculiarity of mind—this hysterical diathesis — will be cured by firmness on your part; by checking if too abundant, or by restoring if deficient, the catamenial discharge, and the use of those fœtid gums to which I have adverted—asafœtida, galbanum, castor, and preparations of ammonia, such as spirits and tincture of ammonia. Ten or twelve years ago I was very much struck with a case of this kind, which occurred in a young lady about 18 years of age. I had attended her for the measles some months before, from which she recovered. She complained of constant pain in the right side, and it was very severe indeed; her tongue was loaded, and she was a person apparently of full habit of body, and the pulse was quick. There were all the symptoms laid down in books as indicative of derangement of the liver—such as pain in the side shooting up to the shoulder, and aversion to food. I had her bled, gave her calomel and saline medicines,—treated her as though she laboured under hepatitis, and under which that disease will ordinarily get well. She became no better, and the larger the doses of medicine which I gave, the more constipated her bowels appeared to become. This is a very common symptom in young ladies labouring under hysteria; they bear such large doses of medicine, that you are astonished how a person, otherwise so delicate, can require so much purgative medicine before a motion is produced. When this occurs to your mind, be assured that there is no occasion for such violent means—more moderate doses, repeated at proper intervals, will succeed when the disordered condition of the nervous system throughout the body has been removed. Her bowels were constipated, and at length she began to have great difficulty in making water. I then had a suspicion that it was one of those diseases which we see every day of our lives in a hospital. The course was altered: I gave her some aloetic pills with myrrh, and ordered the shower-bath. The pain in the hypochondrium disappeared, and she got well. I have mentioned the case because it is instructive to you, as pointing out, that wherever you see a young person with this particular form of complaint, unless there be other symptoms, such as disturbance of the natural and vital functions, tallying, as it were, with the great severity of the pain, whether in the side, the head, or the chest, you should doubt whether it is not one of those irregular cases in which, in order to cure the state, you should strengthen the nervous system, rather than resort to those ordinary methods of treatment adapted to inflammation situated in the viscera.

When a patient has gone so far, it is astonishing how she will sometimes recover. I assure you that I do not exaggerate when I tell you that I have seen case after case of this sort. I saw a young lady recover who had been pronounced by one of the most competent authorities to be labouring under abscess of the brain. She recovered by means of tonic medicine, by nutritious food, beginning by degrees, and then riding on horseback. She is now quite well. Suppose she had been treated by the urgent symptoms only, by lowering that state of the system which appeared to be set up by structural disease, undoubtedly the patient would have died.

In the present case—that of Vaughan—she was put on asafœtida on the 5th November. She had some slight return of the rheumatism, which was obliged to be cured; but in this instance the rheumatism was so masked by the hysteria that I gave her opium, and opium alone; of which she took a grain every two hours. The rheumatism being removed, she then returned to the asafœtida, and I have no doubt that she will ultimately recover. It is very uncommon for us not to have two or three such cases in the house.

The best treatment, where a patient has a difficulty in walking up stairs, is a drachm of ammonia and tincture of valerian, placing in the shower-bath, and giving her good diet and rest. The cases which we see in the hospital are generally those of young women who have been overworked—servants of all-work, or milliners' apprentices, or ladies' maids, who sit up at night for their mistress, and then lie in bed till she gets up, which is generally twelve or one in the day, and who get no sort of exercise. They labour under all those diseases which affect the higher classes of life, and

this is one of the number. Soothe the patient well, and she will speedily get cured.

Supposing, however, that the disease is more severe—supposing there is some loss of power in the lower extremities, or severe pain in the hypochondrium—then you must have recourse to fœtid drugs, and asafœtida is the best. The most remarkable part of the complaint is, that although patients at first are very naturally disgusted at the nauseousness of the fœtor, yet it is astonishing how soon they get rid of it: after a short time, all the nauseousness of the remedy is taken away, and the patient clings to it—asks for it. The extraordinary use of fœtid gums in this disease, has been asserted from the time of the great physicians, who attempted to explain their *modus operandi* by supposing that the uterus became swollen and rose from the pelvis, and that the odour of these gums caused it to return to its proper situation. This proves, however, the very imperfect knowledge of anatomy and physiology which the ancients possessed. They were in the habit of using odoriferous drugs in fumigation, to entice, and gave the fœtid gums to drive the uterus back again. These complaints of a spasmodic nature, and disorders of function of the nervous system, were relieved, 2000 years ago, by those very remedies which are now employed; so that they have the test of experience, whether their mode of operation be well or ill explained. But it is a matter of great importance to remember that their use is confirmed by so many years' experience.

You should carefully consider these particular cases at the bedside af the patient. I know an instance at this moment, of a young lady who was thought to be labouring under spinal disease, and who was kept lying on her back for nine months. It suddenly went away, and then it was suspected that it might be nothing more than hysteria. Such cases, I am sorry to say, are not uncommon. When the patient is young, and there is any debilitating cause, or any irregularity in the catamenia, then you must be especially cautious on this subject, and not believe that inflammation is set up in one or more parts merely because it seems to be so—because you have the symptom of pain. Great evil was done in our profession by that universal system which went to prove that the liver was the cause of all diseases. Every thing painful in the right hypochondrium was referred either to acute or sub-acute disease of that organ, and that, by the way, in a class of the population—viz. young females—the least addicted to those very circumstances which bring on disease of the liver; such as gross feeding and habits of intemperance. Every thing was put on the liver, and blue pill was the universal remedy. The moment a patient complained of pain in the right side, it was set down that she was bilious, and that it must be purged off with mercury; whereas, in nine cases out of ten, there was only a collection of flatulence, arising from the want of proper exercise and pure air, which are at all times so necessary to the health of the body,

When you find the symptoms very difficult to manage, and you are quite satisfied of the nature of the case, from the time and attention you have bestowed on it, then the proper way is to speak to the patient aside; state that you are satisfied that it is an imposition, but at the same time the feeling must arise from ill health, and you will not say any thing about it if she will not repeat it. This often has a very good effect. Dr. Pemberton has mentioned several cases in which such a practice has been attended with great advantage.

GONORRHŒAL RHEUMATISM.

There are but few cases now remaining in the hospital, and in going round to-day I have scarcely written any prescription.

Unhappily, the case of disorganization of the joints, from gonorrhœal rheumatism, makes but little progress, though some degree of improvement takes place in the hand. I have been trying counter-irritation in the knees—such as a large blister—and I have subsequently tried tartar emetic ointment, but both produced so much pain that they were obliged to be given up. Fomentations have since been applied, and the patient has been put under the specific use of colchicum, which in some cases does relieve the pain very materially. Still the great length of time during which the patient has laboured under the disease, makes me fear that little will be done. Though he has gained more benefit than could be expected, still his knees are so disorganized that it seems impossible to effect a cure, or at least many years would be required for that purpose. However, I shall not desist from trying all that the art of physic can do.

OVARIAN DROPSY.

The very few cases which were last taken in are all convalescent, and the patients are about to leave us. There is, however, a case of an ovarian tumor on the left side, in Queen's Ward, but the poor woman is unfortunately labouring under derangement of intellect, and therefore I do not expect that much good will be done.

She was principally taken in because the pressure of the tumor is such that the water is obliged to be drawn off twice a-day. She has been put under iodine, which she takes twice a-day. It may produce a decided effect, which it sometimes does, or the tumor may so grow that it will rise out of the pelvis, and thereby the pressure will be removed from the bladder. It often happens that this is the case. I remember, some years ago, seeing a curious case in private practice. One ovary slipped down between the uterus and the colon, and by its weight dragged the uterus, so as to tilt up the os uteri between the pubes; and in this way it prevented the proper excretion both of the fæces and urine. A sort of retroversion of the uterus took place. I had the patient brought to the hospital, and applied an opiate suppository. By keeping her quiet, and having the urine drawn off, the tumor by degrees became larger, arose out of the place where it was nitched behind the uterus, and the latter organ got right again, so that she was enabled, although labouring under the disease, to go out of the house. The case upstairs is of the same kind. Nothing shall be omitted to try to get rid of the tumor by means that produce absorption; but the growing of the tumor will remedy the pressure, and this is the only view with which I keep her in the house.

THE LATE DISTURBANCE AT ST. THOMAS'S HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

A singular error has crept into a letter forwarded to you from the St. Thomas's Hospital pupils, by which the whole tenor of its meaning is altered. May I beg you to correct it, by altering the monosyllable "to," in the eighth line, to "by," so that the sentence will stand—"exhibited *by* strangers then present.*"

I feel satisfied, sir, that your impartiality will not allow you to be influenced by any biassed statement you have received, or may in future receive, from the gentlemen of Guy's. Let me ask if those gentlemen mentioned in the communication of your correspondent were present at the disturbance,—I mean Messrs. Tweedie, Gaselee, King, &c. Can they be fit judges of that which they did not witness? You evidently have not been informed that the very first breach of order resulted from that "crowding at operations" which you so justly complain of in the present number of your journal. The gentlemen, I believe, did produce their tickets, but they forced themselves into the space around the table, which the porter had been expressly ordered to keep clear. You have not heard, sir, of the impertinent manner in which both Mr. Travers and Mr. Tyrrell were here addressed, and how the latter gentleman was hooted and hissed, because he gave out that it was impossible to operate under the existing state of excitement.

Does it not amount to something more than a misdemeanor, that a multitude of students overpowered a menial, whose most aggravated fault was a strict performance of his duty; and with cries of "throw him over," forced him to the bannisters of a staircase two storeys high, and were on the eve of casting him over? Was it nothing that this same multitude turned the current of their fury upon a gentleman whose noble conduct alone saved them from committing an act of violence rendered shocking by its premeditation, and the result of which might have been too frightful to bear a thought? Were the feelings of the patients considered when this outrage actually invaded the wards?

When the proceedings (both private and public) are made known—when the result of the evidence at the Sessions is published, then may you form a candid opinion respecting which was the aggrieved party, and who were the aggressors: then, and not till then, will the public, and the profession in particular, appreciate the motives of the medical authorities at St. Thomas's in prosecuting their charge.

I may add, sir, that so far from implicating the character of the Guy's students generally, considerable regret was, I believe, expressed by the officers of St. Thomas's that they were unable to detect and separate all, or even the worst, offenders. If the Guy's gentlemen have chosen to make the cause their own, surely it is not justice to complain of the course pursued by the insulted to obtain restitution for offended dignity.—I am, sir,

Your obliged correspondent,

A Voice from St. Thomas's.

December 26, 1836.

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* The error was purely typographical; but the context and heading of the letter surely ought to have sufficiently explained.—Ed. Gaz.

LETTER FROM THE PUPILS OF ST. THOMAS'S.

To the Editor of the Medical Gazette.

Sir,

The statement which appeared in your Gazette of last week, relative to the late proceedings at St. Thomas's Hospital, is verbally incorrect; it being therein said that gross misconduct was exhibited "*to* strangers;" the original expression being "*by* strangers."

In justice to the pupils of St. Thomas's Hospital, you are requested to insert in your next Gazette the inclosed copy of the letter addressed by the pupils to their teachers; of which it may be observed that it does not assume the form of a protest.

"St. Thomas's Hospital,
Dec. 17, 1836.

"The undersigned apprentices, dressers, and pupils of St. Thomas's Hospital, beg to express to the medical and surgical officers and teachers in general, their indignation at the wanton outrage and misconduct on the part of strangers, which occurred yesterday in the surgical theatre. They respectfully solicit the interference of the officers and lecturers, and desire that such measures may be adopted as shall prevent the like proceedings for the future, and ensure to the undersigned the undisturbed enjoyment of their rights. In furtherance of the above object, the undersigned are willing to forego any and all advantages which may be supposed to belong to their privilege of attending the surgical practice of Guy's Hospital; and, taking into consideration the malevolence evinced on the late occasion, they respectfully submit that all strangers whatsoever should in future be exeluded from the *right* of attending the practice of St. Thomas's Hospital."

Here follow fifty-two signaturcs.

St. Thomas's Hospital,
Dec. 28, 1836.

MICROSCOPIC DISSECTION UNDER FLUIDS.

The late M. Cuvier appears to have been the inventor of the little trough in which microscopic subjects are most conveniently dissected. It is a sort of shallow tray about two inches long, by about an inch and half broad. The mode of preparing it is this:—Take a compound of bees'-wax and Venice turpentine, or Canada balsam, and line the trough with it while warm; then lay in the subject to be dissected, first having dried the parts intended to be fixed to the compound; and when the whole is cold, the dissection may be commenced, the trough being first filled with water—or very dilute spirit. By using this contrivance, the parts of the subject are more readily separated, and being covered with a fluid, the adventitious portions are easily washed away with a camel's-hair pencil. The knives used for dissecting microscopic subjects are similar to those employed by oculists for operating on cataract.—For some curious information on this and other practical points connected with the use of the microscope, we must refer the reader to Dr. Goring and Mr. Pritchard's new work—the "Micrographia."

NEW MEDICAL BOOKS.

A Practical Treatise on the Management and Diseases of Children. By R. T. Evanson, M.D., and H. Maunsell, M.D. 12mo. 7s. 6d.

Andral's Clinique Medicale. By Dr. Spillan. 8vo. 25s.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Dec.* 27, 1836.

Abscess	1	Inflammation	24
Age and Debility	23	Bowels & Stomach	1
Apoplexy	5	Brain	3
Asthma	10	Lungs and Pleura	3
Childbirth	1	Insanity	6
Consumption	36	Liver, diseased	1
Convulsions	15	Measles	7
Croup	2	Miscarriage	1
Dentition or Teething	3	Mortification	1
Dropsy	7	Paralysis	5
Dropsy in the Brain	5	Scrofula	1
Dropsy on the Chest	2	Small-pox	1
Erysipelas	1	Sore Throat and Quinsey	1
Fever	2	Stone & Gravel	2
Fever, Scarlet	3	Unknown Causes	3
Fever, Typhus	1		
Gout	1	Casualties	4
Heart, diseased	1		
Hooping Cough	10		

Decrease of Burials, as compared with the preceding week . . 47

NOTICES.

"A Young Practitioner" *may* charge both for attendance and medicine; but he had better specify the latter, and be moderate. It has been so decided from the Bench.

How are we to know whether the statements of "Veritas" are true or false? Why not give his name? "Hibernus" has not withheld his.

Dr. J. Johnson's letter, in reply to Mr. Copland Hutchison, arrived too late for insertion, as we are this week obliged to go to press earlier than usual.

Communications have been received from Mr. Everitt, Dr. R. Williams, Mr. Eales, Mr. H. L. Smith, Dr. Watson, Scrutator.

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THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 7, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XV.

Occasions of medico-legal inquiry respecting the act of Birth—Legal proofs of Concealment of the Birth. Signs of Delivery: 1. *Recent Parturition—the Signs considered—Woman's Milk.* 2. *Remote Parturition—the Signs considered.* 3. *Post-mortem Signs of Parturition, recent and remote—State of the Uterus in recent cases—What may be gathered from the state of the Ovaries—Distinction between genuine and spurious Corpora Lutea. Medico-legal questions—Delivery without assistance—How far the life of the child compromised by it. Parturition without consciousness—Some remarkable cases. Proofs of recent Delivery adduced in the trial Rex* v. *Angus.*

It is a thing of common notoriety, that gross deception has often been practised in reference to parturition, or the act of birth. From an early period it has been an object with legislators to frustrate such attempts; of this the law *De custodiendo partu*, still preserved among our own legal forms, may serve as an instance. In more modern times, the caution observed, particularly in certain foreign courts, under the guise of state and ceremony, to ascertain precisely the birth of a prince, and thus to secure his legitimacy, is well known; nor can we have a better example of the danger of neglecting such caution, than is afforded by the circumstances attending the birth of the Pretender in this country, when, as the story goes, he was smuggled into the royal couch in a warming-pan—a story which is supposed to have gained more adherents to the house of Hanover, than all the reasonings of Somers, Locke, and the other great advocates of the Revolution*.

But without dwelling on the parturition of princesses, it will be more to our purpose to observe, that on all occasions of alleged bastardy, or disputed legitimacy, proofs of actual delivery are required; and that in all accusations of feigned or concealed parturition, the grounds of such charges, supported by personal inspection, are indispensably necessary.

Women sometimes *feign* that they have been delivered, when their motive is probably to introduce a supposititious child as an heir to a property; or perhaps their object is to fasten on a paramour a claim to marriage, or pecuniary compensation. Women, again, may *conceal* the fact of their having been delivered, when they intend, perhaps, to hide the consequences of an adulterous intercourse, or to murder or make away with their offspring.

Legal distinctions.—The crime of concealing the birth is specially denounced in the Lansdowne Act [9 Geo. IV. c. xxxi. § 14], where it is stated, "that if any woman shall be delivered of a child, and shall by secret burying, or otherwise disposing of the dead body, endeavour to conceal the birth, she shall be guilty of a misdemeanor, and be liable to be imprisoned, with or without hard labour, for a term not exceeding two years; and it shall not be necessary to prove whether the child died before, at, or after, its birth."

It is usual, however, to withhold punishment, when it appears in evidence that some preparation has been made for the delivery, as there is thus a presumption raised that the woman expected her infant to live, and intended to bestow some care upon it. Sometimes

* Amos; Medical Gazette, vii. 742.

the proof of such conduct as the preparing clothes for the child, is admissible to negative the charge of intent to conceal.

One or two points are worth observing, with reference to the crime of concealment as just now stated. It is necessary to show that the child is *dead*; otherwise the body of the accusation will be wanting; though, as it is expressly mentioned, it does not require to be proved whether the death occurred *before*, *at*, or *after*, the birth. Another circumstance is, that expenses are not allowed in prosecutions for concealment of the birth. This is not only a hardship on the witnesses generally, but has led to a very cruel practice in some instances towards the accused; the woman is indicted for *murder*, though the evidence is wholly insufficient to support such a charge; but the prosecutor by this stratagem contrives to get the costs allowed for a felony prosecution, notwithstanding the jury negative the murder and find only the concealment. It is satisfactory, however, to find that this base proceeding has not escaped the censure of the bench; it has been animadverted on in severe terms, and the costs have been refused *.

Duty of medical referees. — In all such cases the ends of truth and justice are best attained by a reference to medical testimony; and the medical man referred to, can best perform the duty imposed upon him, when thoroughly acquainted with the circumstances which constitute the signs of delivery. Both mother and child must be carefully examined; for it should be perfectly understood, that when the proposed investigation relates to an alleged delivery, one of the first objects to be inquired after is the offspring — either the infant that has been born, or the ovum which has been expelled; without which the case will be defective on the very face of it; the *corpus delicti*, or main fact of the accusation, will be wanting.

Supposing, then, this preliminary point adjusted, our next step is to proceed to the examination of the reputed mother, to ascertain whether there be present about her person the

SIGNS OF DELIVERY.

These signs I shall enumerate in the order usually laid down. They form two distinct classes, it must be observed, according as the inquiry relates to a *recent* or a *remote* delivery. We shall therefore consider them in this order; and first, let us suppose we have to examine a female who is said to have been delivered recently, or within at least a few days after the alleged event.

1. *Signs of Recent Parturition.*

Much information may be gathered even from external appearances—I mean from the look and figure of the woman generally. Soon after delivery the countenance is pallid; the eye sunken, and not unfrequently surrounded with a dark or purplish ring; there is an appearance of recent exhaustion; the skin is, however, warm and moist, and the perspiration is remarkable for the peculiar odour which it emits; this is what some of the old accoucheurs called the *gravis odor puerperii* and is no doubt connected with the lochial discharge, the smell of both having a close resemblance.

The breasts, in general, after delivery, are more full, tense, and tender, or painful, than in other circumstances. The presence of milk, though taken as an isolated sign it is not worth much, for the reasons noticed in a preceding lecture, is yet of considerable importance when noticed in conjunction with other appearances. Of the milk itself, presently.

If, from noticing the countenance and the state of the pectoral system, we proceed to examine the belly, we shall find after a recent delivery the abdomen flaccid, with the integuments in loose folds, and the *lineæ albicantes*—those lines on the abdomen which are seldom obliterated from the part in women who have once borne children—after a recent delivery, remarkably white, intermixed with a bright red, and exhibiting the appearance of shining streaks or cicatrices.

Coming now to the parts of generation, we shall, of course, find them in no one invariable condition; they will exhibit great variations, according to circumstances; but, in general, they bear the marks of having undergone much violence — rubbed, bruised, excoriated, lacerated perhaps, by the passage of the infant. The vulva is red and swollen, the vagina very distensible, admitting the entrance of the hand without much difficulty; the frenulum or fourchette is usually torn, and probably the perineum has suffered. Continuing the examination up to the uterus, we find the *os tincæ* more or less open, permitting the introduction of one or two fingers; the posterior labium of the orifice is described, also, as being the more prominent of the two. The volume of the uterus may, of course, be expected to be considerable; by raising it from within, and feeling externally on the abdomen, the part will generally be felt above the pubes.

If the placenta have not yet come away —if it have been retained either in the

* Sir G. Lewin; Crown Reports, 45.

uterus wholly, or partially in the vagina, the proof of recent delivery is almost as complete as can be desired; in fact, the presence of the child can alone render it more conclusive. All the signs, you will observe, which I noticed previous to the appearance of the placenta, might readily be imputed by an objector to the expulsion of some unorganized mass, — an event which is not unfrequently attended with similar symptoms as regards the countenance, breasts, abdomen, and parts of generation; but the placenta is a master-sign, which can scarcely be gainsaid.

The discharges are the next object to which you should direct your attention. I allude, in the first place, to the lochial discharge, especially if it be simultaneous with a show of milk in the breasts. The order in which these phenomena occur is generally this:—The moment the delivery is accomplished, all the secretions seem suspended for a short time; but presently the lochia make their appearance. The discharge is sanguineous at first, but soon becomes altered, and has assumed a brownish hue by the end of the second day. The milk fever is generally established about this time, but some women never have it. The breasts being now fully distended, a serous fluid (*colostrum*) issues from them ere long, which ultimately is exchanged for true milk. The lochia are frequently suspended during the presence of milk fever, but the healthy condition of the body being restored, the lochia reappear, and continue, in more or less vigour, sometimes for a month or six weeks: they have that peculiarly heavy and characteristic odour to which I just now alluded, and to which Joerg, Meckel, and other German medical jurists, attach a high degree of importance as a sign. The only other thing relating to the lochia worth observing is, that in many instances they alter, from about the fourth or fifth day, to a purulent-looking or milky discharge, which is not readily distinguishable from leucorrhœa, or fluor albus, with which women are often attacked after their accouchment. It should also be added, that it is not uncommon to find, in some women, all appearance of lochial or other discharge at an end as early as the fourth or fifth day.

Milk of the human female.—With respect to the milk, a few particulars noticed by Berzelius and other eminent chemists ought to be attended to.

Immediately after parturition, as soon as the secretion commences, the properties of woman's milk are found different from what they are afterwards. The *colostrum* constitutes the first produce: this is a soapy sort of fluid, of no great consistency, with some oily flakes on its surface. It is opaque; becomes viscous by exposure to air; grows acid, and putrifies speedily. According to Meygenhofer, the colostrum contains more salts than ordinary milk—diminishing in this respect as it approaches the quality of the latter. In the course of three or four days it loses all its peculiar characters.

Of woman's milk generally, it may be observed that it becomes more concentrated when the breast has been sucked for some time. Its specific gravity is from 1020 to 1025. It contains from 11 to 12½ per cent. of solid matters—of which butter constitutes about 5·18 per cent., while cow's milk contains not more than 4·5 per cent.

Such are the chief signs of recent parturition. As to certain other affections which often attend this state, — uterine hæmorrhage, convulsions, suppression or incontinence of urine, prolapsus ani, &c.—being but *extraordinary* signs not usually occurring, they cannot be of much use to us as medical jurists. When they do occur, moreover, it is as independent diseases, wholly unconnected with labour.

But from the facts and phenomena which I have detailed, the following principles may be gathered:—1. That not one of the signs, excepting, perhaps, the actual discovery of the placenta in the uterus or vagina, can be depended on singly, as a probable proof that parturition has recently taken place. 2. But that their combination may enable us to infer the fact to our perfect satisfaction. 3. That it is a much easier task to discover recent delivery when it has occurred in a woman having a first child, the fœtus also having come to its full time. 4. That we shall be the better enabled to draw our inference as to the true state of the case, when our examination is instituted *soon* after the alleged labour; because most of the signs become less striking, and many of them vanish, in the course of a few days. And, in fine, I may add, as a piece of advice worth attending to, that in making these examinations, we may as well procure as much information as possible relative to previous occurrences—such as whether the female was habitually regular as to her menstrual courses, or rather whether her courses had not been suspended for some months, and whether a sudden diminution of her bulk had not been observed.

I have just said that the examination ought to be made *soon*—without loss of time; but how long a time may elapse, and yet leave us sufficient evidence of what we are in search of, cannot be precisely stated. The generality of jurists and accoucheurs think the period may be ex-

tended to ten days; but a week is probably the utmost that can be safely admitted. Orfila says, that although the medico-legal examiner may have few signs, or proofs, on which to rest his opinion after the lapse of the tenth day, yet, as there may be cases where circumstances are otherwise, he will not by any means assert that a visit at a later period is useless; for in one woman the signs of recent delivery may be as distinct at the fifteenth day as in another at the eighth. However, in general it may be observed, that if women who wish to conceal their having recently been delivered, can so manage matters as to escape an examination till the eighth or tenth day, they may bid defiance to legal functionaries and medical jurists; and the escape of many egregious offenders has been purely owing to such delay.

The same authority gives us a report which may serve to illustrate our present subject. The female who was examined was 25 years of age, and supposed to have been delivered fifteen days previously. "She assured us (says the reporter) that she had never been even pregnant. We proceeded to a personal examination, and found the genital organs not tumefied beyond the natural state of the parts. There was no trace of cicatrix at the perineum. A thick whitish fluid was discharged from the vulva, having a *feeble* odour resembling that of the lochia, which was further strengthened by examining the linen. The skin of the abdomen was wrinkled, particularly about the umbilicus and groin, with numerous striæ, glistening and whitish. The recti of the abdomen and linea alba were distinctly divided about the navel. Bosom of the ordinary volume; no fluid obtained by pressure from the breasts. By the touch, and the hand applied externally, impossible to detect the presence of the uterus above the pubes. Its orifice semi-open and awry, with labiated structure. On making her walk, we noticed that she betrayed the feeling of slight pains in the articulation of the pelvis. Our conclusion is, 1. That the lady has been *probably* delivered *some* time since; the time may be supposed fifteen or twenty days. 2. To speak positively, we should have seen her ten or twelve days sooner."

2. *Signs of Remote Parturition.*

We have next to consider what are the signs of a *remote* delivery,—whether there be any signs by which we may determine that a woman has formerly borne children? The inquiry is by no means merely a curious one, for circumstances may arise where a woman would fain be thought never to have been a mother, and where her assertion might require to be backed by medical testimony. And on the other hand, women who have never had children may sometimes fancy it their interest to affect the contrary; as the following remarkable occurrence, which had nearly proved serious to the pretending party, will show: — A girl feigned herself pregnant, and deceived her lover into the belief that she was so, with the hope that he would marry her. He, however, remained obdurate, and she carried on her scheme even to the *ninth* month, when she went so far as to stain her bed and body-linen with some sheep's blood, and confined herself to her apartment for several days, as if she had actually gone through a labour. No marriage, however, took place; and the parties separated. But at the end of two years the lover bethought him that he was a father, and had a desire to see his child: he demanded it in due form, but was of course refused. However, as he would not be denied, he brought the lady before the magistrates, to give an account of what she had done with the child. She then pleaded that she had never had one; but her story was not credited, and she would infallibly have been punished for making away with her offspring, had not the matter been referred to three eminent medical men—MM. Capuron, Maygrier, and Villermay—who were enabled to satisfy themselves that the accused had never been a mother.

But with regard to the *signs* of remote delivery. If it be difficult to speak positively even in recent cases, how much more so may it not be expected to be when the fact is supposed to have occurred long ago? The points, however, which may serve us in such an investigation are these:— 1, The wrinkles of the abdomen which are often left after pregnancy, and which are ineffaceable; 2, Sometimes the separation of the recti muscles in the neighbourhood of the umbilicus, giving a greater breadth to the median line at that part; 3, In certain cases, a cicatrix, which denotes laceration of the fourchette or the perineum, and some irregularity of form about the neck of the uterus. This part is described in such cases as very uneven in shape, and not conical, as it is when pregnancy has *not* occurred; the orifice of the uterus is also ever after said to remain more or less open, or gaping. The *lineæ albicantes* should not be forgotten, which also are ineffaceable. The abdomen is usually loose and rough, and the breasts flaccid and pendulous. Yet we must recollect that none of these characters warrant us in doing more than *presuming* that the

woman has once been delivered,—we cannot affirm any thing; while their absence, on the other hand, is conclusive that she has *never* been a mother.

3. *Post-mortem Signs of Delivery.*

It might perhaps be thought that the proofs were much more attainable and more obvious, when we have an opportunity of examining the internal organs. And so they are,—when we have an opportunity also of seeing the child; and especially when the alleged delivery is recent. Otherwise it may be extremely difficult to come to any satisfactory conclusion.

The post-mortem appearances which may be considered as indicative of a *very recent* delivery are these:—1. The altered shape and augmented volume of the uterus: it will have a flattened flabby aspect, and measure probably from six to eight or perhaps nine inches in length; the os uteri will be more or less open, so that the hand can easily be introduced. 2. The remains of the decidua will be found on the inner surface, loose and flocculent, except where the placenta was attached, and there the parts will appear bare, and exhibit those peculiar valvular openings which have been noticed as the terminations of the veins or sinuses of the uterus.

But these appearances will be greatly modified according to the time that has elapsed after delivery, and also according to the constitution of the woman. In some females, it may be observed, as complete a restoration to the natural condition of the parts will be effected in two or three days, as in others after a week.

The ordinary course of the changes, however, is as follows:—Suppose delivery has taken place at the full time, and that the uterus has contracted well, this organ may be expected to be found in *two or three days* reduced to the dimensions of about six inches long, by three or four broad; its substance will be about an inch thick; and the fallopian tubes and ovaries will appear turgid and vascular, lying by the sides of the womb. After *a week*, the length of the organ will scarcely exceed five inches; its substance will be reduced, and its colour will appear pale compared with its usual muscular aspect at an earlier date. No very striking or characteristic appearance marks the state of the uterine apparatus later than *ten or twelve days* after delivery; little, therefore, can be expected from an inspection. It is true that the parts probably do not regain their primitive and normal state till after the lapse of about a month: but then the appearances observed in the latter part of this period too much resemble what might be produced by other causes than delivery, to allow us to form a satisfactory diagnosis.

Corpora lutea.—The state of the ovaries, and the possible detection of a corpus luteum in one of them, may throw much light on the inquiry. I have already noticed the fact of the presence of a corpus luteum affording sufficient indication of a recent conception; and I shall take this opportunity of bringing before you some other points connected with the subject. The following peculiarities (borrowed from Dr. Montgomery's description), mark its presence, so as effectually to distinguish it from other yellow structures sometimes observed in the ovary, and confounded with the body in question.

A genuine corpus luteum is generally oval in shape, and its size is about five-eighths by three-eighths of an inch; its thickness less than its breadth. Its texture is glandular, somewhat like that of the kidney. It is very vascular, its vessels being sometimes visible without any preparation, but almost always (at least until it begins obviously to decline) admitting fine coloured injection thrown in from a branch of the spermatic artery. The course of the little vessels is from the circumference to the centre. As to its colour, it is expressed by the epithet which it bears—*luteum*, a dull yellow or saffron hue; in the recent state, it has a slightly reddish tinge, and has been compared to the buffy coat of the blood. In its centre is observed a little cavity (or "a radiated white cicatrix"), larger or smaller according to the time at which it is examined. Within the first three or four months after conception, the cavity may be about large enough to inclose a grain of wheat; it is bounded by a strong white cyst, the parietes of which approximate and ultimately close up, leaving no appearance at last but that of a cicatrix; and this cicatrix, which is characterized by its being white and radiated, is visible as long as there are any remains of the corpus luteum.

The time of the disappearance of a corpus luteum seems to be variable; but it is supposed to be wholly obliterated by the sixth or seventh month after a delivery at the full period. The corpus luteum of a preceding conception, according to Dr. Montgomery, is never to be found along with that of a more recent, when gestation has arrived at its full time; but in cases of miscarriage, repeated at short intervals, it may.

It is a vulgar error to suppose that the number of children a woman has borne is indicated by the number of corpora lutea found in the ovaries. The mistake seems to have originated with observers who were

not acquainted with the proper appearances of a true corpus luteum, but confounded with them whatever yellow marks were detected in the ovary.

That true corpora lutea are sometimes formed in the *virgin* ovary, is another error founded in inaccurate observation. It is supposed by those who maintain that they are so formed, that they result from intense sexual desire, or a state resembling the "heat" of animals. But Haller's proposition, I should say, has been fully proved, to be perfectly consistent with truth and fact:—"Corpus luteum in virgineis animalibus nullum est; ex conceptione oritur, neque prius paratum adest." No true corpora lutea are ever found previous to puberty; nor are they found in married women who, though properly formed, are childless, and have never conceived. "If mere imagination," as Dr. Montgomery justly observes, "or highly excited desires without intercourse, are capable of causing such a change in the condition of the ovary, should we not expect to find corpora lutea almost invariably in women who have been living with their husbands, or otherwise enjoying constantly the natural and perfect excitement of the generative system without conception? of the non-occurrence of which consequence we can speak in very decided terms, from numerous opportunities of making examinations under such circumstances."

It may be as well to state in what respects these spurious corpora lutea (called *virgin*) differ from the true ones, or those produced by impregnation. Dr. Montgomery sums up their characters concisely in the following words:—"1. There is no prominence or enlargement of the ovary over them. 2. The external cicatrix is wanting. 3. There are often several of them in both ovaries, especially in patients who have died of tubercular diseases. 4. They are not vascular, and cannot be injected. 5. Their texture is sometimes so infirm, that they seem to consist merely of the remains of a coagulum, and at others appear fibro-cellular, and resembling that of the internal structure of the ovary; but in no instance did we ever see them presenting the soft, rich, and regularly glandular appearance which Hunter meant to express when he described them as 'tender and friable, like glandular flesh.' 6. They have neither the central cavity, nor the radiated cicatrix which results from its closure."

Medico-legal questions.—Let us now proceed to notice a few medico-legal questions connected with delivery, which have been sometimes proposed. We all know that it may, and has in some instances happened, that delivery has been concealed; mention of it has been suppressed, because, perhaps, the child has been lost through accident or mismanagement. The unfortunate mother dreads the consequences of being thought to have murdered her infant, or she wishes to avoid the exposure attending the fact of having lost her child by mischance. She therefore attempts to keep her delivery a secret; but the child most likely is found, and justice must be satisfied. The question, then, may arise, whether a woman in labour can always save her child if she chooses? In most cases she can or may; for it seldom or never happens that a woman is ignorant of the fact of her pregnancy: she ought, therefore, to have a shrewd suspicion of the probable time of her confinement; and prudence enjoins her to have every thing prepared for the occasion. It tells strongly against a woman in these circumstances that she has prepared no baby linen, nor told any one of her actual state. But again, it must be recollected that accidents may occur. A woman may have a wide pelvis; and in the very act of straining to evacuate her bowels, the child may be expelled. Labour sometimes comes on in the most rapid manner, and a woman may be delivered suddenly while engaged in her ordinary avocations. Even when she is well prepared and situated as comfortably as could be wished, fatal accidents may take place: the accoucheur or the nurse-tender may not be present; the child is expelled; there is a gush of waters; the infant lies on its face in the discharge, and is suffocated. Such things have happened. Dr. Hunter met with a case of the kind, and every accoucheur probably can add some example of the same nature, derived from his own experience.

M. Foderé relates a painfully interesting story of a patient of his—the wife of a goldsmith, who was suddenly taken in labour as she was walking across her room. The child fell from her, and broke the funis. The mother, bathed in blood, caught up the infant and called for help; but no one heard her. She hastily compressed the umbilical cord with her fingers, and was found two hours after in a swoon, with the cord still in her hand. Help even then was luckily not too late: both mother and child were saved.

Delivery without consciousness. — Another inquiry sometimes made is, whether a woman may be delivered without being conscious of it,—or more properly, can parturition take place in a state of insensibility? That such an event should occur during natural sleep (however violation, or impregnation, may be in that state effect-

ed), is, at least in first cases, perhaps little better than a romantic fiction. You will see a beautiful passage in the *Faery Queene* of Spenser, where such an occurrence is related of—

> Faire Crysogone in slombry traunce whilere;
> Who in her sleepe (a wondrous thing to say)
> Unwares had borne two babes as faire as springing day.

And in Wieland's *Oberon*, Amanda is not less fortunate; but in point of fact, or real life, it is only barely possible, and that, perhaps, only where the woman has borne several children before. An instance of this kind is related by Dr. Montgomery, of a lady who was awakened one night by her little daughter, who slept with her: the child became alarmed on finding a third person in the bed,—a baby, born without the least consciousness on the part of the mother.

There are cases on record, and in sufficient number, to oblige us to admit that delivery may take place without the female knowing it—if, for example, she be completely intoxicated, or labouring under the influence of powerful narcotics. Apoplexy, delirium, syncope, or apparent death, are states which may also prevent the mother from being conscious of her labour. Not to go back to the case mentioned by Hippocrates of the woman who, in a state of apparent death from acute fever, was delivered of a child without betraying the least consciousness, there was the extraordinary event that befel the Countess St. Geran, related in the *Causes Célèbres*. She was stupified with an intoxicating beverage, and while in a state of profound trance, was delivered of a child. When she awoke, she found herself bathed in her own blood: her abdomen was reduced in size, and she was in a state of extreme exhaustion. She called for her child; but the object of the conspirators was answered—the child was no longer forthcoming. Sometimes the relaxation of the muscular fibre immediately after death, together with the struggles of the yet living infant, is capable of inducing delivery. One of the most remarkable examples of this kind is given in the *Journal des Savans*. A pregnant woman died, or was dead to all appearance for two hours. M. Rigaudeaux examined the body, but could find no pulsation in either heart or arteries: there was foam at the mouth; the belly was greatly swollen; the orifice of the uterus dilated; the membranes were protruding. He determined to turn the child, and take it away by the feet. It seemed dead when brought into the world, but by careful management and attention bestowed on it for three hours and a half, animation was restored. All this time there was not the least sign of vitality about the mother; but since the limbs did not grow stiff after seven hours from the moment of apparent dissolution, M. Rigaudeaux did not altogether abandon hope. He would not allow the body to be removed: he continued his cares, and in two hours and a half more, that is, nine after apparent death, the woman was roused to animation. But the fact of the delivery, which is what we have to notice particularly, is well authenticated.

I find, in the Annual Register, a curious case recorded, which occurred about ten years later than the preceding:—

"On the 12th of August, 1759, the wife of Edw. Knight, of Warwick, was taken in labour about five o'clock in the morning: the midwife who attended her, after giving her all the assistance in her power, believed her to be dead, and then left her. About five in the afternoon, the dead woman was put into a coffin, with a shroud over her. The next morning, the nurse, going into the room where the corpse lay, fancied she saw something move the shroud up and down in the coffin, and ran away, much frightened, to acquaint the people of the house below. They immediately went up stairs to examine what it could be, when, on turning down the shroud, to their great astonishment, they saw a live child grovelling in the sawdust, which had delivered itself from the corpse as it lay in the coffin."

It may not be improper to add, that a somewhat similar circumstance is said to have happened in the case of the late Mde. Malibran. The attendants were laying out her body after death, when the fœtus which she carried came away. Here, however, there could have been no active force exerted by the infant, for it was immature and dead.

In conclusion, I shall take leave to call your attention to a criminal trial, remarkable as having involved two very important points — one of them closely connected with the subject just now under our consideration.

Rex v. *Angus*.—In this celebrated trial, which took place at Lancaster, in 1808, Mr. Charles Angus was indicted for the murder of Miss Burns, on two special counts, one for poisoning, the other for procuring abortion. I shall here only notice the appearances which were observed in the internal genital system, and which were adduced in evidence against the prisoner on the second count. Miss Burns died suddenly, after forty-eight hours' illness; and the circumstances were so suspicious that the coroner ordered her body to be examined without delay. The following is

that part of the report which it is consistent with our present purpose to extract: — "The uterus was so enlarged as to be capable of containing nearly a quart of fluid. The os uteri and the soft parts were also greatly dilated. Before the uterus was removed from the body, Mr. Hay placed his left hand on the fundus, and introduced his right hand with the greatest care into the organ, until the fingers of the right hand could be felt by those of the left, through the fundus. The uterus being taken out of the body, an incision was made along its whole length, and its cavity laid open. The whole internal surface of the uterus was bloody; and near the fundus there was a well defined circular space of a deeper colour than the rest of the internal surface, and about four inches and a half in diameter. This space was rough and ragged, and a small fragment of what appeared to be the placenta still adhered to it; and the blood-vessels opening upon it were distinctly visible, and as large as a crow-quill, whilst every other part of the internal surface was smooth. The walls of the uterus were about half an inch in thickness: there was no coagulum in it. The os uteri remained in so dilated a state, that the four fingers of a hand, drawn together into the form of a cone, would pass through it without in the slightest degree distending it." It is added, that the vagina had evidently suffered much recent distension, and that the external parts were very bloody.

The inference drawn from these appearances, by the medical examiners, was, that the deceased had very recently given birth to *a child* nearly at the full time; and a positive opinion to that effect was given in evidence at the trial afterwards. But there was not much sound discretion in this: no such strong opinion should have been hazarded in the absence of one most material proof—*the child* said to have been born.

It was objected, on the other hand, that it was very improbable a fœtus and placenta had been expelled, because, from the largely dilated state of the uterus, a placenta could not have been detached without excessive hæmorrhage, leaving the womb full of coagulated blood. It was further suggested, that what was called the placenta mark, might rather have been the spot to which a body of hydatids had been attached by a broad footstalk.

The latter objection was very gratuitous; for besides that there were no more hydatids forthcoming in evidence than a fœtus, it is pretty plain that no such substance had been expelled; had it been so, proof of the fact would hardly have been withheld, and the production of a hydatid mass would have gone far to nullify the charge of abortion.

Nor does the other objection seem less feeble. It was evidently founded in ignorance of the true state of the uterus after parturition. From the account already given of the appearances characteristic of a recent delivery, it will be perceived how consistent with the usual condition of the parts were the pathological phenomena noticed in Miss Burns' case. The size of the uterus corresponded with what is usually observed shortly after delivery, and was exactly what might be expected when the birth was somewhat premature. In corroboration of this assertion we have the opinion of Mr. (now Sir Charles) Clarke, who saw the uterus in question. "I have seen," says he, "uteri after the death of patients lately delivered, in whom, however, there was no hæmorrhage, which have been contracted in no greater degree than the uterus which is in the possession of Mr. Hay."

But these were not the only objections to which the medico-legal examiners in this case left themselves open. Without adverting to the evidence respecting the appearances observed in the stomach, which will hereafter more properly be adverted to, it may be observed that the proofs they gathered of the fact of delivery fell far short of what might be expected from practitioners undertaking a medico-legal investigation. It does not appear that they paid the least attention to the state of the *breasts;* a capital omission, as you must be aware from the remarks already made. And what is still more reprehensible, although they all professed to attach great importance to the detection of a *corpus luteum*, as a sign of impregnation, it was not till about six months after they examined the body that they bethought them of opening the ovaries. The trial, in fact, was over, and the prisoner acquitted, when a grand display was made of a corpus luteum only then discovered. The uterus and its appendages were brought to London, and exhibited to the profession here; certificates were obtained from Drs. Denman and Haighton, Messrs. Cline, Clarke, Astley Cooper, and Abernethy, expressive of their opinion that the appearances could only be accounted for on the supposition of pregnancy and parturition; and that the presence of the corpus luteum put the fact of pregnancy beyond a doubt. But all this looked not well in the eyes of an intelligent public, nor did it contribute much to the reputation of Forensic medicine.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture II.

Connexion between disease of the Liver and disease of the Heart—Chronic Hepatitis, from this source, curable in young persons—Enlargement of the Spleen connected with superficial Ulceration of the Legs—Erysipelas and Gangrene, sometimes of a pseudo-inflammatory character—Treatment of this form of disease.

At my last lecture I endeavoured to point out some remarkable connexions of diseased action observed in certain morbid states of the economy. I shall pursue the subject a little further to-day, as I look upon it as extremely important in a practical point of view. There is another organ whose morbid affections frequently implicate the liver; I allude here to the heart. I have already spoken of certain cachectic states, in which the liver becomes enlarged and hypertrophied as the result of the general derangement of the system. In the present case the hypertrophy and disease of the liver originates in a morbid condition of the heart; this is a very frequent cause of hepatic derangement. You have an example of it at present in the chronic ward, in the case of a poor man labouring under bronchitis of long standing, with disease of the heart, dropsy, and enlargement of the liver. In cases of this description it is a matter of some difficulty to determine in what organ the morbid sequence commences; for where many diseases coexist, it is not easy to ascertain how they are related to each other as cause and effect. I have, however, had several opportunities of observing the progress of the disease from the commencement, and the manner in which the different organs become successively implicated.

Some time ago there occurred a remarkable example of this form of hepatic affection in a relative of mine, aged 14, who, in consequence of exposure to cold, was attacked with rheumatic inflammation of the joints, of a very intense character. Owing to a want of proper care, the disease was allowed to go on unchecked, and metastasis to the pericardium took place. I happened to be out of town at the time, and he had no advice or assistance for nearly twenty-four hours. Pericarditis of a violent character became developed, and it was only by the most energetic treatment that he escaped with his life. He had pericarditis with effusion, and all the physical signs and symptoms of carditis. After the acute symptoms were removed, the signs of adhesion of the pericardium, hypertrophy, and partial valvular disease, continued; and for a long time the heart's action was invariably accompanied by a loud bruit de soufflêt. These affections were followed by dyspnœa and increased action of the heart. But this was not all. He next got inflammation of the testicle, and finally chronic hepatitis with enlargement. The liver grew to a very considerable size; it continued to enlarge for about seven months; and altogether he laboured under a chronic form of hepatitis for more than a year. At last the disease yielded to treatment, and he recovered completely.

This, you will say, was a fortunate termination; but in young persons the powers of nature often act in a very remarkable manner in remedying or removing disease, and cures are sometimes effected in such patients which it would be quite absurd to expect in persons advanced in life. After having laboured under a long train of diseases, and having continued an invalid for nearly five years, this young gentleman at last, owing to his youth and favourable constitution, surmounted all his maladies, and is at present as strong and healthy as any person I am acquainted with. In this instance the chronic hepatitis was the result of the pericarditis, which formed the first link in the chain; and for the space of a year this young gentleman continued to labour under an affection of the liver, the result of disease commencing in the heart. This is a morbid sequence very frequently observed. You have pericarditis, accompanied with inflammation of the lining membrane of the heart, partial disease of the valves, hypertrophy of the muscular substance, and then enlargement and induration of the liver. This is a very common complication, and deserves your most particular attention. When you see a patient whose appearance indicates disease of the heart—who has swelling of the face, dyspnœa, lividity of the lips, and turgescence of the cutaneous vessels—in fact, that peculiar expression of countenance which at once informs the practised observer that the patient is labouring under disease of the heart, you should not neglect to inquire after the condition of the liver, for in such cases it is very frequently in a state of chronic disease. I pointed out this circumstance some time since, in the case of a late surgeon, Mr. M., and directed the attention of the medical gentlemen engaged in the treatment of the case to the liver, in which no one had suspected the

existence of disease. Recollect, therefore, that in many cases of disease of the heart you will also, on examination, find disease of the liver, produced, as far as I can judge, in the majority of instances, by disease of the heart; at least, I think I have never seen any case in which the hepatic affection had the initiative, and seemed to have brought on the organic affection of the heart. In Mr. M.'s case, and several others which I had an opportunity of watching from the commencement, I have no doubt that the disease of the liver was secondary, and that the morbid sequence commenced with the heart. I am quite convinced that disease of the liver may give rise to functional derangement of the heart; for whatever impairs secretion and deranges digestion, will give rise to palpitations, tendency to syncope, and other phenomena of functional disease of the heart; but I have never seen any example of organic disease of the heart as the result of disease of the liver.

It is of some importance to be aware of this complication; for in treating the disease of the heart you must also attend to the hepatic affection, because it has a tendency to aggravate and confirm the cardiac symptoms. This affection, however, is not to be looked upon as acute, or even subacute hepatitis. There is scarcely any pain of the side or tenderness present, and the patient is not always jaundiced; it appears to be scarcely any thing more than congestion, causing hypertrophy and chronic morbid growth. I shall not, however, speak too positively on the subject, as the difference between hypertrophy and inflammation of a low and obscure character cannot be easily determined*.

There is another disease in which derangement of the liver is a common symptom, and I bring it forward chiefly for the purpose of rendering the subject under discussion more complete, as it is an occurrence well known to practitioners, and sufficiently dwelt on in medical books. I allude to that affection of the liver which is observed in cases of intermittent fever. Ague frequently produces a powerful determination to the internal organs, particularly the liver and spleen, and if treated badly, or unsuccessfully, is apt to bring on disease of the liver. The organ becomes congested, hypertrophied, and indurated, and presents a condition somewhat analogous to that which supervenes on disease of the heart, or results from the cachectic state of constitution produced by mercury or scrofula.

The next form of organic derangement which I shall briefly touch on, is that of the spleen. It is of advantage to place cognate affections beside each other, for the purpose of comparison; by doing so, we frequently derive many instructive and useful analogies. Besides, we have had a remarkable case of enlargement of the spleen in our wards at the same time we had the cases of hepatic disease to which I have alluded. I may observe, that the circumstances under which enlargement of the spleen takes place, differ in many points from those which determine hypertrophy of the liver. We have but few examples of inflammation of the spleen, while the cases in which enlargement and congestion of that organ take place are numerous. From the peculiarities of its anatomical structure, the spleen is very apt to become suddenly enlarged. Like the liver, it may become indurated and hypertrophied from intermittent, or from some general disease affecting the system, and thus lead to a train of secondary phenomena; the most remarkable of which is dropsy. But there is one peculiar symptom attending enlargement of the spleen, which I have frequently pointed out to the attention of the class, as observed at least in two-thirds of the cases, and of which we had an excellent specimen in the patient under treatment in the chronic ward. The history of this symptom is the more curious as showing a remarkable uniformity in the phenomena of a particular disease at very distant periods of time. This is seen by comparing the most recent descriptions of Indian splenitis, as given in an able analysis of Voight's work on the Spleen, published in a late number of the British and Foreign Medical Review, and the description of enlargement and disease of the spleen given by Aretæus. The ancients, it is true, cannot be now considered as authorities to be followed either in pathology or practice; for they were ignorant of many of the most important facts connected with the healthy and diseased states of the human body. In consequence of their inaccurate anatomical notions, they were unable to appreciate or describe many of those details which now enrich the domain of pathological anatomy: their writings, however, are invaluable in many respects, as containing admirable descriptions of diseases which still continue to infest the human body, and as recording certain groups of symptoms which are still associated. A comparison of their descriptions with those of modern times, cannot fail to be extremely curious, and may even prove highly instructive; for if we find that certain inter-

* I am glad to find that this subject has been taken up by so able an observer as Dr. Bright, who, in the third number of Guy's Hospital Reports, p. 605, has made some excellent remarks on the influence of heart disease in producing congestion of the liver. In Dr. Elliotson's Human Physiology, Part I. p. 103, there are some observations which throw much light on the intimate relation existing between the circulation within the chest and the liver.

nal affections have, from the most remote antiquity up the present period, been generally accompanied by peculiar derangements of distant parts, we are authorized in considering this connexion to be something more than accidental, and consequently we may be led to discover relations between organs generally believed to be quite unconnected with each other. Thus, some years, I had three patients in succession under my care, who laboured under chronic enlargement of the spleen, who were all affected with a similar sort of cachexy, and had all the same affection of the skin—namely, superficial ulceration of the legs. This coincidence forcibly arrested my attention, and I was still more struck with the observation, on finding that Aretæus had noticed this very circumstance in his admirable description of splenitis. "If (says he) the spleen does not suppurate, but becomes chronically enlarged, then the patients lose their appetite, and become cachectic, swollen, and of an unnatural colour, while the surface of the body manifests a disposition to ulcerate, particularly on the legs: the ulcers are hollow, round, livid, sanious, and difficult to heal." This description agrees precisely with the cases to which I have already referred, and it coincides, in a very remarkable manner, with the account lately given by Dr. Voight, of chronic disease of the spleen, as it occurs in India. He observes, that the cachexy connected with the splenalgia Bengalensis frequently manifests itself by a tendency to ulceration; the disposition to which is so great, that leech-bites and blisters occasionally give rise to foul or phagedenic ulcers, which, under certain circumstances, as where the patient has used mercury and is residing in a swampy district, will sometimes run on to a fatal termination. It is also curious, that the predisposing causes of the different varieties of chronic enlargement of the spleen, as given by Voight, are exactly the same as those detailed by Aretæus; and both writers correspond in their statements as to the age and habits of life of persons most liable to this disease, as well as the nature of the locality and the season of the year most favourable to its production. This agreement between authors separated from each other by so many centuries, and who describe the disease as it occurred in distinct regions, and among different races of mankind, is extremely curious, and exhibits a very remarkable example of the identity of the morbid phenomena produced by the same causes.

So far of the pathological states of particular organs which arise in certain conditions of the system, and most generally form a terminating link in the chain of diseased action. You will perceive that my observations are chiefly limited to a detail of the most important pathological observations made in our wards during the preceding three months. After we have made a brief review of what has occurred during this period, we shall take up the consideration of the cases at present under treatment.

The next disease which came under our notice so often as to deserve a separate notice, was erysipelas. There were some points of interest connected with the history of the erysipelas which prevailed in this hospital during the months of August, September, and October. In the space of somewhat more than two months, we had about twenty cases of this disease; and, indeed, the morbific cause appears to be still lingering in our wards, though less frequently manifesting itself, for we have had only one case within the last ten days. Before, however, I proceed to notice the phenomena of the disease, as observed here, I shall make a few observations connected with the treatment of this affection in general. I am anxious to direct your attention to this point, because the history of this epidemic has furnished some useful lessons, and has shown how much the treatment of any disease will depend on its epidemic character and existing peculiarities. The disease was treated here in every instance, and through all its stages, with wine, quinine, and opium; and, with the exception of a single case, this treatment has proved uniformly successful. Erysipelas, you are aware, is generally looked upon as an inflammatory disease, and its treatment is always more or less antiphlogistic, particularly during the early stage. At this period, it is customary to treat it with general bleeding, leeching, scarifications, purgatives, mercury, and tartar emetic; and I will allow that many cases should be treated in this manner. But the gentlemen who have attended this hospital within the last three months, have witnessed a form of erysipelas which required from the beginning an exactly opposite line of treatment. In the management of the cases which fell under our observation, no one in his senses would think of using general or local depletion, purgatives, or tartar emetic. The moment the disease appeared, we were obliged to attack it with tonics, narcotics, and stimulants. You perceive, then, that in erysipelas there are two very distinct extremes, between which there are many intermediate shades and varieties. It is well to bear this in mind. When you are called to treat a case of erysipelas, you should recollect that it is a disease capable of exhibiting a great variety of forms, amenable to no fixed line of treatment,

and requiring for its management all the sagacity and skill of an accomplished practitioner. I have seen many instances in which this affection appeared in a distinct and well-marked inflammatory form; and I have treated cases with venesection, leeching, purgatives, and tartar emetic, and found these means admirably well fitted to remove the disease. Here, on the contrary, wine, opium, and sulphate of quinine, were the only remedies on which we could rely with any degree of confidence. On the other hand, you will meet with intermediate cases in which these different modes of practice should be employed, either at distinct stages of the complaint and at a considerable interval, or should succeed each other by a rapid transition. Erysipelas, I must again repeat, should not be treated from its name. Many persons have maintained, that when gangrene supervenes on inflammatory affections, and among the rest, on erysipelas, that it is the result of an excessive degree of inflammation, and that it might be successfully combated by judicious depletion. This, however, is by no means generally true; and it is of importance that, in forming proper notions of the pathology and treatment of erysipelas, you should dismiss from your minds all preconceived opinions, and be regulated solely by the impressions derived from correct observation and facts. What I wish to impress upon your minds is, that gangrene may and does occur in cases of erysipelas quite independently of excessive inflammatory action, and requiring a plan of practice quite different from the antiphlogistic. I do not assert that gangrene does not arise in many instances from the violence of erysipelatous inflammation, and that in such cases it is to be met by prompt and decided antiphlogistic treatment, but I think your views of the pathology of this disease will be both imperfect and false, if you look upon the gangrene which frequently supervenes in erysipelas as the result of immoderate inflammatory action. The following case, which is one of extreme interest, will, I think, bear me out in my assertion.

Mrs. B., a lady of middle age, was attacked with feverish symptoms on the 24th of last March. Notwithstanding the diligent employment of antiphlogistic treatment by Mr. Barker, the pyrexia increased; in the course of a few days her throat became sore, and shortly afterwards erysipelas appeared on the face. Her case assumed a very dangerous aspect: she continued seriously ill for some days, and was saved with difficulty. On the 1st of April Mr. Carmichael advised the diligent application of fomentations, with the view of relieving the local symptoms; and her son, a young man of eighteen, of temperate habits, florid complexion, muscular frame, and who had always enjoyed a vigorous state of health, undertook the duty of applying the fomentations with much zeal and assiduity. Towards evening, he thought, but without reason, that her case was hopeless, and fell into a violent paroxysm of grief, from which he was induced to rouse himself for the purpose of resuming his occupation of applying the fomentations. While thus engaged, he got, to use his own expression, "a whiff of sickening air from the bed clothes," and immediately felt unwell. This was on the 1st of April. On the 2d he was feverish, and complained of headache, for which he got aperient medicine, and was leeched. On the 3d there was no improvement, and he had passed the night without any sleep. On the 4th, Mr. Carmichael considered it necessary to leech the temples again, and to continue the exhibition of antiphlogistic and aperient medicines. He now began to complain of severe pain in the right shoulder, which at first appeared to be of a rheumatic nature. He became more and more restless, and on the 7th of April was reported to have slept none for the three preceding nights. A very perceptible fulness was now observed under the right clavicle, extending down over the pectoral muscle; the parts were tender to the touch, but not red. Mr. Carmichael now examined the hand and arm of the same side with much attention, for the purpose of ascertaining whether any wound or injury had existed, for the symptoms seemed to resemble closely those produced by poisoned wounds. None, however, could be detected. The restlessness now increased to an extraordinary height; during the following night the patient changed from one bed to another at least one hundred times, and the servants were incessantly employed in making and adjusting three beds, from one of which he wandered to another, impelled by an intolerable feeling of anxiety and uneasiness. During this period his bowels were free, his urine copious; and though his fever was considerable, it was by no means proportioned to the nervous excitement; nor was it accompanied by delirium or pain in the head. The swollen parts of the trunk were leeched freely twice, and diligently fomented, and continued to present the same appearance until the 10th, when a red patch appeared near the shoulder, subsequently spreading into a vividly red erysipelatous blush, which occupied the skin covering the pectoral muscle, and right axillary region. I saw him for the first time on the 11th. His pulse was 120, and by no means deficient in

strength; skin hot, but covered with perspiration; he did not complain of headache, but was quite sleepless, and exeessively uneasy. His muscular strength was apparently not much reduced, and, indeed, until a few hours before his death, he was able to turn in bed with ease. His tongue was dry in the centre, and furred, but moist at the edges. The erysipelas was now spreading rapidly towards the left side, and down the front of the abdomen. An attempt was made, but in vain, to arrest its progress by the application of nitrate of silver to the skin around its margin, an operation which was performed with great care by Mr. Carmichael. Mercurial ointment was next applied to the inflamed surface, and although the erysipelas continued to spread, we were led to entertain some hopes of our patient, having succeeded, by means of tartar emetic, followed by opium, in procuring for him much, and as he said, refreshing sleep. On the morning of the 13th, however, a black colour of the corium was observed in the situation of one of the bullæ on his left side. This alarmed us; and in a few hours afterwards our suspicions were confirmed by the appearances of dark maculæ in many parts of the erysipelatous surface. These livid patches spread very rapidly, and were in some places accompanied by effusion beneath the cuticle, but in others they appeared to consist in a mere change of colour in the external surface of the erysipelatous corium, without any detachment of the epidermis. The patient took abundant nourishment, and got wine and cordials, but without any favourable effect. The scrotum now became engaged, and speedily assumed a gangrenous appearance. In some places the epidermis separated, and the gangrenous surface of the corium secreted sanies in large quantity, but in many parts no detachment of the cuticle took place. On the 14th, nearly the whole of the right side of the abdomen and the scrotum were superficially gangrenous, and the belly became tympanitic. During this time apparently healthy fæces were discharged in considerable quantity; the skin was covered with perspiration; the urine was copious and natural; and we had here, what is worthy of notice, apparently healthy secretions from the bowels, liver, skin, and kidneys, co-existing with extensive gangrene of the surface. His tongue, however, continued dry and furred; his restlessness unabated; and the sleep previously procured by means of opium now ceased, although that medicine was repeated in the same doses. His pulse also began to sink, but he remained quite sensible and free from delirium until immediately before his death, which took place on the evening of the 15th. During the latter days of his illness he had sweated copiously, and there was nothing remarkable in the odour of the perspiration. I may also observe, that the pulse likewise furnished but very fallacious indications; for I can assert with truth, that six hours before his death, though soft and compressible, it still possessed a steadiness and a volume by no means calculated to impart a suspicion of his approaching dissolution. His strength was also such as would lead to an erroneous conception of his real danger; for, as I have before observed, he was able to turn in bed shortly before death. This observation is borne out by other cases, in which persons with extensive gangrenous erysipelas, and in imminent danger, have been known to be capable of walking about.

The evidently contagious nature of the erysipelas in this instance, and the youth and previous good health of the patient, render this case sufficiently remarkable. It is likewise worthy of notice, as proved by the circumstances, that the gangrene did not originate in the excessive violence of the cutaneous inflammation, for it did not appear in those portions of the skin which were primarily and most violently affected. On the contrary, we observed that the parts which became gangrenous had been paler and less tense than those which did not assume that condition, and that the portions of the skin which died, were those which had become engaged at the latter stage of the disease. This is of importance; for, combined with other facts, it forms an obvious refutation of the opinion not long since maintained, that gangrene and sphacelus are in all inflammations the result of immoderate inflammatory action, and consequently to be averted by antiphlogistic treatment only. In many instances this opinion, and the treatment founded on it, are, no doubt, judicious; but that there are cases in which the gangrenous tendency supervenes on inflammation, or in other words, is superadded to the inflammatory process, but independent of its intensity, no one will deny who candidly weighs the details of the case which I have just related, and recollects that the conclusions deducible from them have of late received too frequent a confirmation, from the rapidly fatal progress of putrid sore throat—a form of cynanche which has reappeared in Ireland, after having almost disappeared for upwards of twenty years. In both cases the disease appears to be infectious, and in both the gangrene seems to be quite independent of the intensity of the inflammation.

This is a question so important in a practical point of view, that I shall make no apology for detaining you, as I am

anxious to impress upon the minds of my younger auditors, that there are certain forms of disease termed inflammatory, in which the ordinary treatment by depletion is quite inadmissible. I shall at my next lecture enter upon the treatment of fever, and endeavour to communicate such observations as a review of our cases for the last three months has afforded. And here I beg leave to return my thanks to the gentlemen who have furnished the cases, and to express the gratification I have felt in finding that so many of the pupils have recorded their facts in such a clear and satisfactory manner.

THE SECOND SOUND OF THE HEART.

CONTRIBUTION TOWARDS ITS PATHOLOGY.

To the Editor of the Medical Gazette.

SIR,

IN the closing sentence of the interesting *Report of the London Committee of the British Association on the Motions and Sounds of the Heart**, it is observed that the subject "requires further investigation, especially in its relations to pathology."

The second sound of the heart is ascribed in the *Report* to "the sudden closure of the sigmoid valves by the columns of blood that recoil back on them during the diastole, impelled by the elastic contraction of the arteries."†

This explanation of the diastolic sound was first published, I believe, by M. Rouanet, to whom it appears to have been suggested by Dr. Carswell. It is much insisted upon by M. Bouillaud also, in his *Treatise on the Diseases of the Heart*.

The well-devised experiments of the Committee supply strong confirmation of its truth. In the second of the subjoined cases, I offer one out of many *pathological* facts that might be brought forward in support of the same theory. The first case was probably of a like nature; and it was sufficiently remarkable to be worth recording.

CASE I.—James Parker, aged 45, a farm-servant, and formerly a sailor, was admitted into the Middlesex Hospital, under the charge of Dr. Macmichael, in the year 1830. I transcribe the following account of his symptoms from notes which I took at the time.

"Occasional aching pain in the cardiac region; constant palpitation; shortness of breath, especially upon exertion; slight cough, without expectoration; inability to lie on the left side, because that position brings on, or increases the pain, and produces a sensation of weight in the situation of the heart; stooping occasions a feeling of tightness, and as if something is about to give way at the lower part of the sternum; a sudden pain sometimes affects his left arm, beginning at the insertion of the deltoid muscle, and running down to the hand, the little finger tingling meanwhile with that sensation called *pins and needles*. No dropsical effusion.

"A very remarkable sound is audible, accompanying the diastolic movement of the heart, and alternating with the pulse. It is a loud and prolonged noise: judging by its duration, the diastole must occupy more time than the systole. It is heard in all parts of the chest, but most loudly at the upper part of the lower third of the sternum.

"To my ear the sound very closely resembles the smart hum that marks the commencement of the spinning of a large humming-top: others compare it to the sound of a whizgig—of the flight of a beetle or hornet—of the cooing of a dove." Of the singular intensity of this sound, I recorded the following evidence:—"I heard it quite plainly when the unassisted ear was at least a foot from the patient's chest, in a room where several persons were talking. His voice is very resonant through the stethoscope, yet it is not louder than the morbid sound, so heard, of the heart. The patient himself hears the sound at all times; and he states that it has been louder even than it is now, and that his fellow labourers had often heard it in an open road, at the distance of several feet. Every now and then, at irregular intervals, the sound is cut short, or suspended for a moment, and then proceeds again—that is, it is double, like a hiccup interrupting a groan, or like the broken coo of a dove. He is quite aware of this "double beat," and says that whenever it occurs, he feels a sort of *crack*, and a slight degree of pain, at the back part of his head. A strong jarring thrill, synchronous with the

* MEDICAL GAZETTE, p. 360 of the present vol.
† P. 367.

diastole, can be felt by the hand placed upon the sternum.

"The murmur of respiration is natural, but feeble, except when his breathing is hurried.

"He gives this account of himself. Eleven months ago, being quite well, he was employed in wheeling a heavy barrow of sand, and as he turned it over to empty it, one of the handles struck him on the left side, just below the cartilages of the ribs. The pain produced by the blow was not very severe, but it *continued*, and after about a month it increased in intensity, when he was bled. A fortnight after this the palpitation began. Since that time he has been much in the same condition as at present."

This patient left the hospital neither better nor worse than when he entered it, and I have not seen or heard of him since.

Some time afterwards, a patient came in under my care, with a similar, but much less loud, diastolic sound. He also went away, somewhat relieved.

I am not speaking of the *mere bellows sound* which *not unfrequently* accompanies the second movement of the heart, and which consists of a *rushing*, or *blowing* noise. Yet it may further the object of the present paper, if I state that in every instance of *this* kind, where I have had the opportunity of examining the heart after death, I have found some change which must have rendered the closure of the aorta by the sigmoid valves imperfect. And I had concluded that the same valves were affected in the two cases in which I had heard that different and much louder booming sound, approaching in its tone and quality to the human voice. This conclusion was at length strengthened by the occurrence of a third and *fatal* case.

Case II.—Thomas Burrin, a butler, aged 36, became my patient in the hospital, on the 27th of last May.

His feet and legs were anasarcous, and his belly contained some fluid. He complained of difficult breathing, which prevented him from lying down—of "fluttering" at the heart—and of a slight dry cough.

He had been ailing for nine months, with uneasy sensations in his chest, and palpitation much increased by moderate exercise. Four days before his admission his legs began to swell. The orthopnœa had existed for a week.

Sixteen years previously, for the only time in his life, he had had "rheumatic fever." His chest was then blistered, on account of pain which he felt there.

Large crepitation could be heard at the lower part of each lung. The first sound of the heart was not unnatural. The second consisted in a long drawn and very loud vocal note, audible to the patient himself, who (unprompted) compared it to the cooing of a pigeon. It was noisier on the right than on the left side of the sternum.

He remained in the hospital till his death, which took place on the 2d of July. His dropsical symptoms had gradually increased, and the dyspnœa, which was permanent, became aggravated in occasional paroxysms of extreme severity. They were more relieved by mustard poultices than by any thing else. The loud cooing sound scarcely varied, and was never absent.

The recollection of the two former cases made the inspection of the body a matter of peculiar interest to myself. Much curiosity respecting it was shewn also by the students and others, it having been conjectured by some that the cause of the sound would be found in a diseased state of the *mitral* valve.

The heart was very large. The pericardium adhered to it at all points, by cellular tissue, which was dry, and evidently not of recent formation; but neither was it dense or tough.

The right side of the heart offered no unusual appearance. The left ventricle was much dilated, and considerably thickened. The mitral valve perfect and healthy. The aorta was narrowed at its commencement by abundant deposition beneath its lining membrane, which was projected into bosses or little tumors, immediately behind the valves. There was a small ulcerated spot on the summit of one of these projecting nodules.

The sigmoid valves of the aorta were curiously altered. They were all irregularly thickened by opaque matter deposited between the layers of membrane of which they are chiefly formed. Two of them were folded, or rather hung back, a little way. Their free margins, to the depth of two or three lines, were quite loose and flapping, so that the

slightest force, even their own weight, was sufficient to incline them to either side, to produce either inversion or retroversion of the loose portion. The edge of the third valve was straight and tight, as usual; but the others could not be pulled tight, so as not to flap. They were all capable of perfect apposition with the sides of the aorta, but the two were evidently not capable of sustaining the backward pressure of the blood in that vessel during the diastole. The stream of regurgitating fluid must have occasioned their loose margins to vibrate; and the vibration doubtless gave rise to the peculiar sound. The physical conditions necessary on acoustic principles, for its production, appear to have been complete.

It can scarcely be questioned that the cardiac disease commenced during the attack of acute rheumatism.

I have the honour to remain, sir,
Your obedient servant,
THOMAS WATSON.

Henrietta-Street, Cavendish-Square,
Dec. 28, 1836.

REVIEW

OF

SOME OF THE PROMINENT NOVELTIES OF THE NEW EDITION OF

THE LONDON PHARMACOPŒIA;

AND A

Few Specimens of the "great Care, Pains, and Industry," with which the Old Edition has been "Revised, Corrected, & Reformed."

BY THOS. EVERITT, ESQ.
Lecturer on Chemistry at the Middlesex Hospital School of Medicine.

IN the first place, the measures have all new values; for in the old edition the wine gallon of 231 cubic inches of pure water was taken as a standard; this was divided into eight pints, the pint into sixteen fluid ounces, the ounce into eight drachms, and the drachm into sixty minims. In the present edition the imperial gallon of 70,000 grains of distilled water, at 62°, is assumed as a standard; this is divided into eight pints, but the pint is now divided into *twenty ounces*: the further division as before. Hence—

	Value in Grs. of pure Water, at 62°.	
	Old.	*New.*
Gallon (231 × 252·45)	58316	70000
Pint	7289·5	8750
Ounce	455·6	437·5
Drachm	56·95	54·7
Minim	56·95 / 60	54·7 / 60

The present gallon and pint are therefore about one-fifth larger than the old ones; and the present ounce, drachm, and minim, about 1-25th smaller.

I shall not attempt to argue for or against the necessity of this change, nor dilate on the possible results. The difference in the value of the ounce and drachm is so small, that it may in most cases be neglected, and the old measures used for the new.

One of the principal objects of the editors of a Pharmacopœia ought certainly to be, to relieve the medical man from as much as possible of the mental drudgery of recollecting and calculating proportions: might it not, therefore, have been well, when they felt compelled to alter the value of their measures, in order to make them agree with the imperial gallon, to have thrown overboard all arbitrary divisions of pint, ounce, drachm, &c., and have taken the grain, 10-grain, 100-grain, 1000-grain measures of distilled water at 62°; these still would have been aliquot parts of the imperial gallon. Then, by making all the fluid solutions contain a certain round per centage (a great number might have contained exactly the same)

of the active principle, no calculation on the part of the medical man would be necessary. But by the present regulations we have no unity of design; for some solutions are defined as containing so much for the fluid ounce or drachm—as, for instance, the arsenical solution, half a grain to the drachm; some as containing so much per cent., as the dilute hydrocyanic acid, which is to contain 2 per 100 of real acid; and the same of the other dilute acids, &c. Thus when a medical man has to prescribe hydrocyanic acid, and wishes to come at the quantity of real acid he is exhibiting by measure, he must call to mind—

1st. That the dilute acid contains 2 per 100.

2dly. That the fluid drachm contains 54·7 grains.

Lastly, make the mental calculation, as 100 : 2 : : 54·7 : X.

Had they defined the fluid draehm to contain one grain of real acid, all this drudgery would be spared.

The next novelty is the "Notæ breves, ad res chemicas præcipuè spectantes, quibus quidque, sincerum sit, necne quantum fieri potest, deprehendatur." These we conceive to be highly valuable; and had they been more extended and precise, and the formulæ in the body of the work entirely omitted, this part would have assumed a form which the present state of things demands.

At a period when every druggist was presumed to *make his ounce and pound* of these ehemicals, such formulæ were useful; but now that they are *manufactured by cwts. and tons*, it is quite useless giving processes which few will find either economical or convenient to follow.

Here again we observe a want of unity of design; for why have we not a formula for preparing sulphuric acid? "Because," I suppose they would answer, "any arrangement for making a small quantity, would furnish it at a priee ten or twenty-fold dearer than as at present made." This sort of reasoning applies to all the formulæ in kind, to many even in degree. Now as all these matters (it is, of course, not intended to include mixtures, such as tinetures, plasters, &c., but only definite chemical products) can be so precisely defined chemically and physically, as to enable any one to distinguish the body named from every other, and to detect the minutest traee of adventitious matter, and as by being manufactured on the large seale they are furnished at a minimum cost, why take the trouble of giving a formula, when perhaps half a dozen others may be equally good, and it will depend entirely on the other objects of the manufaeturer which is the most economical. Thus A is a maker of carbonate of soda from salt; he gets hydrochlorie acid at the same time. B is a maker of sulphate of magnesia from bittern; he also gets hydrochloric acid at the same time; and this acid, procured from distilling sulphuric acid with muriate of magnesia, is just as good as that obtained from salt by sulphuric acid, provided care be taken to have it pure.

The *third novelty* is the change of names. Although this may be a source of slight annoyance to old practitioners, every teaeher of chemistry and pharmacy will hail with joy this alteration, as he was constantly confusing his pupils by a confounding of the scientifie ehemical names with those used in pharmacy. This, therefore, will scarcely be a ehange to all those who have been edueated within the last ten years, but will be relieving them from the neeessity of recollecting the distinction between the two nomenclatures.

We will now give a few instances illustrative of the great care with which this work has been exeeuted.

Amongst the *Notæ breves* we have the strength of the ammoniæ liquor defined 0·960, and of the ammoniæ liquor fortior, 0·882; "liquor hic ad normam liquoris ammoniæ redigi potest, cuique fluid-unciæ adjestis fluid-unciis tribus aquæ destillatæ." In the body of the work we have no formulæ for making the fortior, but for the liquor ammoniæ—

> "℞ Ammoniæ Hydrochloratis, uncias decem; Calcis, uncias octo; Aquæ, octarios duos. Calcem aquâ resolutam in retortam mitte, dein Ammoniæ Hydrochloratem in frustula contritam et reliquam Aquam adjice. Destillent Liquoris Ammoniæ fluid-unciæ quindecim."

Now liquor ammoniæ of ·960 contains about 10 per 100 of ammonia; and

liquor ammoniæ of ·882 contains about 30 per 100 of ammonia. Hence a fluid ounce at ·882 weighs (437·5 × ·882) 386 grains; and 100 : 30 : : 386 : 115·8 ammonia, 270·2 water. Hence, to reduce this to 10 per 100, or to ·960, it will require 774 grains of water, or, in round numbers, 1 f. oz. 6 f. drs.; at any rate, only 2 f. oz. of water to 1 f. oz. of the stronger to reduce it to the weaker, and not THREE, as prescribed.

Touching the formula, perhaps the worst of those in the old edition was that for preparing liquor ammoniæ, and in the present the alterations are merely to suit the new measures. Every 54 grains of hydrochlorate of ammonia contain 17 grains of ammonia. Hence as 54 : 17 : : (10 oz. × 480) 4800 grs. : 1511 ammonia in ten ounces; and 15 fluid ounces at ·960 weigh (15 × 437·5 × ·96) 6300 grains, which, at 10 per cent., gives 630 grains of ammonia obtained, and consequently wasted 881, by the badness of the process.

What manufacturer will follow a process where the loss is more than one-half? I always consider my operation bungled if the loss amounts to five per cent.; and I proceed thus: — Hydrochlorate of ammonia, 10 parts; lime, 8 parts. Put 4 parts of water on the lime, cover it over, and allow it to slake and cool. Put both into a flask having a long neck; pour in 6 parts of water; through a cork which fits the mouth of the flask tightly, put a safety tube, and a gas conducting tube bent twice at right angles; the joint to be secured by lime and white of egg lute. Place the flask in a sand bath; insert the free end of the bent tube to the bottom of a narrow-mouthed bottle, surrounded by cold water, or ice if at hand. Put into the bottle water, according to the strength of the liquor ammoniæ required; for that of ·960 about 30 parts; gradually increase the heat of the sand bath, so as to drive over the ammonia and some water. By the time that the 30 parts of water in the receiver bottle have increased to 35 parts, nearly all the ammonia will have passed over.

By operating in this way the liquid has no empyreumatic odour; and I have frequently, on noting the quantity and exact strength of the product, not lost more than two per cent.; which has happened to me in two careful repetitions of this process, made since the new Pharmacopœia came into my hands. If the liquid be required much stronger, it is better to have two receiving bottles arranged, so that what escapes absorption in the first goes on to the second. By having the flask of such capacity that it could contain about three times the quantity operated on, and by its having a long neck kept vertical, all risk of any of the lime salt spirting over is avoided (much of the commercial liquor ammoniæ contains chloride of calcium from this cause), and the product is quite pure. For very delicate chemical purposes an intermediate small receiver is useful, but for pharmaceutical use quite unnecessary.

Hence the ten ounces of hydrochlorate of ammonia could at any rate make 30 fluid ounces at ·960, in the room of 15. The great loss is occasioned, *first*, by not putting part of the water into the receiver at the commencement, as sufficient does not pass over when the mixture is first heated to condense the gas; and, *secondly*, by leaving so much water in the retort at the end.

I must confess that this is the worst specimen which a hasty glance has discovered, and that I have experienced great satisfaction at seeing many of the improvements; for having had to lecture for the last six years expressly on the Pharmacopœia at Mr. Grainger's School, it has always been a disagreeable task to comment on many of the old formulæ, which were below all criticism; whereas, in its present form, it will be comparatively a pleasure to go over the same course.

I cannot refrain from stating, that it is a source of some disappointment to me the not being allowed by the College to make a translation, with comments, for my pupils; as four months of last summer, independently of previous investigations, have been closely devoted to experiments on these subjects. I have, however, the consolation to know that the announced work of Mr. Phillips will, as far as my pupils are concerned, render this circumstance unimportant.

There is a misprint in the second formula for dilute hydrocyanic acid, which is not among the errata of the duodecimo edition; and as it is from a suggestion of my own, I wish to point it out here. The proportion of *cyanide of silver*, 9½

grains, and *dilute hydrochloric acid*, 9 *minims*, for *one* ounce of water, ought to be 48·5 *grains of the cyanide*, and 39·5 *grains of the strong hydrochloric*, to produce an acid of the defined strength, 2 per 100.

Laboratory, Middlesex Hospital,
Dec. 27, 1836.

ON THE

CAUSES OF THE RESONANCE IN PERCUSSION.

To the Editor of the Medical Gazette.

Sir,

In a report of a discussion at the Westminster Medical Society, contained in the Lancet of last Saturday, it is stated that my friend, Dr. C. J. B. Williams, contended, in a communication to the meeting "Upon the Theory and Practice of Percussion as a Means of Diagnosis"—"that the sound heard in percussing the chest is not seated in the air contained within the chest, but that it is dependent upon the vibrations of the walls of that cavity, those vibrations being modified by the quantity of air contained within"—"that the chest belongs to that class of musical instruments in which the sound depends on the vibrations of a solid, as in the drum, the string of a harp, &c., as distinguished from instruments in which the notes are the results of the vibrations of the air itself, as instanced in the flute," &c. &c.; the author then proceeding, with his usual ability, to illustrate his position experimentally and otherwise. Those observations of Dr. Williams remind me of the accompanying observations and experiments, which I had intended many weeks since to forward, as I hoped in a more complete state, to the Medical Gazette, and which you will oblige me by inserting in an early number.

Some portion of them has been made to clear up a difficulty in which I found myself, upon the occasion of a paper on Percussion, read by me some weeks since at the Harveian Society, and containing a view of the causation of pectoral resonance, from which my friend Dr. Williams dissented: I allude to the comparative trials of lung and liver in various media, &c. But the greater part originated in the phenomena of a case that occurred about six months since, in the Marylebone Infirmary, and respecting the interpretation of which there was some difference of opinion. The former part appears to me difficultly reconcileable with Dr. Williams's theory of percussion, as expressed in the extract above given from the Lancet, and as understood by myself from his oral observations at the Harveian Society; and if verified by others, will, as I think, call for some modification of the theoretical views entertained by Dr. Williams on the subject. The latter illustrates a point in semeiology not generally well understood, as I imagine, and yet worth knowing—a point respecting which, at all events, I was myself much in the dark, until I had made the experiments about to be detailed—viz. the ready transmissibility of sounds, such as those occasioned by tapping the chest, and by breathing, through considerable masses of morbid effusion.—I am, sir,

Your obedient servant,
John Clendinning, A.M. M.D. &c.

Wimpole-Street,
Jan. 1, 1837.

George Priest, aged 45, servant of a gentleman in Brook-Street, was admitted under Dr. Sims on the evening of June 20, 1836, labouring under symptoms obviously referable to a pleuritic attack. He had been in his ordinary health, which he described as good, until within a month of his admission. He was then affected with pain in his right side, and other pleuritic symptoms. An eminent physician in the neighbourhood prescribed for him, and amongst other things introduced Davis's needle on the side affected, but without obtaining any decisive result. On his admission he complained still of pain in his right side, and had cough and fever, and considerable anasarca; there was little respiratory sound, little resonance on percussion on the side affected, and the motions of the ribs were very slight. On the left side respiration was loud, and resonance and mobility normal; he had the appearance of a person much broken by disease. The pleuritic symptoms were first attended to; afterwards the dropsical symptoms became urgent, and diuretics were ordered. The chest had become round, tense, and distended on the right side, which measured more than an inch more than the left; the

distension was especially observable about the hypochondrium, which became quite tumid. Before this time the edge of the liver had been perceptible far below the level of the edges of the ribs on the right side, and had afterwards become imperceptible to the finger, owing to the tenseness of the hypochondrium. Over the whole of the side affected there remained to the last moment, and even on the dead body, above the summit level of the diaphragm, or from about the nipple upwards, a very easily appreciable degree of pulmonary resonance; far below the normal standard, of course, but still clearly superior to that of the region of the liver, or of any solid organ.

In the Infirmary, likewise, the needle was tried, but, owing to what cause I cannot say, with no better success than out of doors. Nothing escaped from the puncture but a little bloody serum. This might seem to render doubtful the diagnosis; but whatever may have caused the failure of the needle, the real state of the chest could not be questioned. Three or four physicians that saw it agreed without hesitation as to its being a case of hydro-pleurisy; but there appeared still room for doubt as to the precise condition of the lung, as to the extent of the effusion, and the degree of compression and shrinking of the lung. On this point there was some difference, more especially between myself and my friend Dr. Harrison. The remnant of resonance obtainable every where above the level of the nipple, and not affected by change of posture, led me to think that the lung must have escaped total compression, owing, probably, to some attachment to the ribs preventing its complete shrinking back upon the mediastinum; while Dr. Harrison, from experiments on mediate percussion, &c. by M. Piorry, which he had witnessed, and other facts that had fallen under his observation, conceived that the resonance was not less than, or different from, what might be expected in a case of extreme compression and shrinking.

The patient lingered a month, and sank the 19th of July last. Permission was obtained to inspect the body, and the following was the result. I shall notice only the appearances bearing on the subject of the diagnosis.

The body was much wasted, and the rounded and enlarged right side appeared on that account the more strikingly abnormal in size. The chest gave the same resonance in every part as during life; the whole right thorax was filled with dark serum, amounting to about 14 pints; the lung lay solid and concentrated against the mediastinum, and more forwards than the spine, and was of firm spleen-like consistence; the diaphragm on the side affected was everted, so as to be concave above and convex below; the right half of the liver was thrust down into the umbilical region, and the left half tilted up, so as to encroach upon the regions of the stomach and heart; the stomach was thrust down into the iliac and hypogastric regions; the lungs were on both sides sound, the compressed lung not less so than the normally distended lung.

Such are the memoranda taken on the spot. Now assuming that the serum and compressed lung constituted the whole contents, it is obvious the remnant of pulmonary resonance observed during life and after death, on the diseased side, must be attributed to one or both lungs.

But I could not conceive that the resonance of air could be heard through such a dense medium as the effusion from a distance of several inches; or more properly, I could not believe that a gentle tap, such as used in percussion, would cause audible sound in air at five or six inches distance, and protected from the impulse by a thick layer of dense fluid interposed. I accordingly had recourse to experiment, to satisfy myself of the correctness of Dr. Harrison's view of the matter, and with that intention made repeated trials, with that gentleman's assistance, with sound and unsound lungs, and with the following results, as recorded in my memorandum-book:—

July 29th.—After having removed all the pectoral viscera from the thorax of a female dead of apoplexy, that cavity was filled with water, and a piece of lung was immersed in the water, and percussion practised. The lung was held down under water at various distances from the side, and the tap was always given to a part of the walls of the chest below the level of the surface of the water. When the lung was held within half an inch or an inch of the rib, the resonance was clear and une-

quivocal, though of course not equal to that obtained when the lung was brought into contact with the ribs. At greater distances it was less soft, and much duller, and about four inches from the ribs became obscure.

Now the lung used in that experiment was much charged with blood, and less resonant, probably because more dense than normal. On the 1st of August, therefore, I repeated the experiment, with a lung in all respects normal, but collapsed, of course, and containing but the minimum of air. The chest was filled and percussion used, as before, and various distances tried; and in this case the resonance of the immersed piece of lung could be heard at any distance from the spine to the rib percussed. Indeed my note states that "the piece of lung told, on percussion through the water, from the opposite side of the spine—*i. e.* across one half of the chest and the spine. Every body present was satisfied that the resonance was distinctly audible when the lung was immersed in the water close to, but beyond, the spine."

October 4th.—Lastly, we had an opportunity of trying the experiment with a highly emphysematous lung. In this case, the objection that the resonance in each experiment might be owing to vibrations of the portion of the thoracic parietes projecting above the water, as it was impracticable to fill the chest quite full, was obviated by the use of a screen. The chest was filled as far as it would hold water, and the emphysematous portion of lung was immersed; but instead of modifying the resonance merely by varying the distance between the part struck and the lung, we used a pasteboard screen also, by inserting which, wholly or partially, between them, without change of interval, we produced numerous shades from distinct resonance to dulness, and satisfied ourselves that the emerging portion of the parietes was not the cause of the softer or clearer sound elicited by percussion, when unimpeded by a screen or by distance.

October 14th.—I again repeated the experiment with a screen, with perfectly sound lungs, and with considerable care, and with the same results, for the most part, as before; except that we agreed that the screen did not so completely intercept the impulse of the percussion as to prevent the presence of a piece of lung being sensible to the ear across half the chest, provided the percussion was pretty strong and the impulse was given in the direction of the lung. I mean vertically to the lung; for any considerable degree of obliquity in the direction of the stroke, we found to diminish, or even to extinguish, resonance in the portion of lung operated on. In this experiment, a split kidney was likewise used as a screen, owing to some doubt respecting the acoustic properties of the pasteboard; and with that fleshy and rather thick screen, the pulmonary resonance was still, though less easily, obtainable.

From the preceding facts, I felt warranted to conclude, that, in cases of hydrothorax, if either lung be nearly sound, there will be no fleshy dulness of resonance in any of the lateral parts of the chest; because, even in cases such as Priest's, in which one lung was consolidated, the opposite lung would yield a certain resonance of a pulmonary character to even moderate percussion on the middle-third of the ribs. Since, however, it might still be doubted whether the interposition of the contents of the cavity of the mediastinum — the trachea, œsophagus, great vessels, bronchial glands, and lower down the pericardium and heart—would not intercept the impulse of a stroke practised on the middle parts of the diseased side in a pleuritic subject, and extinguish resonance of the sounder lung, I made, some days after, the following experiment:—

A chest was filled with water, and a sound piece of lung was immersed, or rather left immersed *in situ*, with the heart, great vessels, trachea, and other contents of the posterior mediastinum entire. Percussion was then practised on the opposite side, and an unequivocal pulmonary resonance was obtained through the water filling the side of the chest percussed and the contents of the posterior mediastinum remaining *in situ*, from the sound portion of lung lodged beyond the spine in the other cavity. This experiment was repeated sufficiently often, and with results sufficiently uniform, to satisfy every observer, when taken in connexion with the preceding ones, that, in the living subject, the destruction of one lung and occupation of the space by water, would not, if the other lung were pretty sound, necessarily prevent the evolution of pulmo-

nary resonance on percussion of the diseased side, notwithstanding the intervention of the contents of the posterior mediastinum, and of a quantity of water sufficient to fill one pleural cavity.

From the preceding case, in connexion with these experiments, then, it appears that, in simple pleurisy, we must not expect to find the pulmonary resonance wholly wanting, even in cases of extreme effusion and compression; and that considerable effusion and compression, and consequently considerable functional lesion of the lung, may co-exist with a degree of resonance of percussion that might readily deceive an experienced observer.

Respiratory sounds.—In the case of Priest, the respiration was audible, distant, and feeble, rather within ten days of his death, when there was already a very copious effusion in his chest. The fact I distinctly remember of a sensation as of a respiratory sound, but at the time (forgetful of certain cursory notices by Andral, Clin. Méd. t. iii.; Piorry, Procédé Opér.), I was disposed to think myself mistaken or deceived by some of the numerous sources of fallacy surrounding all observations on living bodies. Since then I made some experiments that show that it really was the bronchial respiration that I heard. On the 25th of November last I procured the lungs of a child seven months old, and immersed them in the chest of an adult, previously filled with water, and then had them inflated through the trachea, and while under water. The lung was first held on the spine under water, and then inflated, and the ear-tube was meanwhile applied to the outside of the chest, and the resonance of the inflation, resembling the normal respiratory murmur, was distinctly heard by my friend Dr. E. Harrison, who assisted me in the experiment, and by other gentlemen, I think, as well as myself. The lungs were then removed to the corner formed by the spine, ribs, and diaphragm, on the floor of the chest, and then inflated, and the ear-tube was applied above the clavicle of the opposite side, or at a distance of more than six inches from the inflated lung, and the respiratory murmur or resonance of artificial respiration was distinctly heard. The lungs were then removed to an open vessel of water, and while immersed were inflated; and at the same time the end of the ear-tube was immersed in the water at two or three inches distance from the swelling lung, and then the resonance of inflation was distinctly heard. The lung was then inflated while floating on the water, and the ear-tube was applied to the bottom of the vessel, so as that several inches—as many as three or four—of water were interposed between the ear-tube and the source of sound, and then also the resonance of inflation was distinctly heard.

Experiments similar in essential nature and in result were made with a flexible tube, to imitate the bronchus, through which air was forced by means of an elastic bottle fastened on one end of the tube, and alternately compressed and suffered to expand; but the results were as above, and the experiments with the lungs seem to admit of but one interpretation, viz. that in cases of effusion in the thorax respiratory sounds may be expected to be heard at the usual places, so long as the effusion is not so great as to compress the lung to an extreme degree,—probably so long as any considerable portion of the lung continues permeable by air of the bronchus.

Theory of Percussion.—The preceding experiments relate to the use of the mechanical signs in the diagnosis of dropsical affections of the chest; the following refer entirely to the theory of some of the principal of those signs, especially percussion. I have, in the note accompanying this statement, given extracts from the Lancet report of Dr. Williams's views as to the causation of pectoral resonance, and stated that they differ from my own in that my friend Dr. W. attributes much, or even the principal share, of the sound to vibration of the walls of the chest; whereas I incline to the opinion that those walls are, for all medical purposes, to be considered as but conductors of, and often embarrassing impediments to, sounds elicited by percussion, breathing, speaking, &c. from the viscera they enclose. Of the facts upon which that opinion is founded, the following appear to me sufficient examples. With respect to the sounds of respiration, &c., suffice it to say that I have repeatedly auscultated the lungs during inflation both in and out of the body, *i. e.* mediately and immediately, and with this only difference, that I heard better immediately than me-

diately: the flexible ear-tube, applied alternately to the chest and to the substance of the swelling lung, gave in the former a feebler, in the latter a louder sound. But to pass from what I am not sure that Dr. W. and I differ about, to what I know we disagree upon, I subjoin experiments, tending to establish, as I conceive, my views as to the share of the walls of the chest in the resonance of percussion.

Taking a piece of sufficiently healthy lung and a piece of liver, as extreme examples, I subjected them to percussion in a variety of circumstances. I had both of them held side by side inside and against the same wall of the thorax, and percussion practised outside the thorax, alternately over one and the other,—and the one gave purely a pulmonary, and the other a fleshy resonance. On repeating the experiment in water, I obtained the like results, the presence of the denser fluid making no material difference. The lung and liver were then removed to a wooden shelf, and percussed mediately with the pexímeter and the finger, and immediately with the finger or a scalpel, and with like results in all cases: the lung gave true pulmonary resonance, and the liver that of fleshy parts, hepatized lung, &c. The same experiment was repeated on a marble table, and with the parts successively suspended in air, and supported on water, without any material difference of result. Now these experiments having been repeated sufficiently often, and being quite simple, admit of but one interpretation, as I conceive, viz. that the wall of the chest is not the source of the soft pulmonary or dull hepatic resonance, which are owing mainly, and, practically speaking, we may say wholly, to the lungs, liver, &c., respectively seated underneath the parietes; and that the walls are but conductors, and often at the same time dampers, of the resonance of the organs beneath them.

"IS TASTE A SPECIAL SENSATION?"

To the Editor of the Medical Gazette.

Sir,

I have perused, in your number for Dec. 17, a letter from Mr. Noble, of Manchester, reflecting upon the paper lately published by me in the Dublin Journal, upon the relations of the sense of taste, and to which you have paid the compliment of republishing it in your journal. The temper and purport of the letter alluded to have surprised me beyond measure; and being as unconscious of having given to Mr. Noble any just cause for dissatisfaction or complaint, as I am desirous to stand acquitted of the charges which he has endeavoured to father upon me, I solicit your insertion of my reply.

I beg, *in limine*, to remind you that the first paragraph of my paper states, that my design was to communicate the results of a series of investigations into which I had been myself led by the uncertainty which prevailed with regard to the sense; and having thus premised, and in terms tolerably express, that my purpose was to submit my own views and inquiries, I was not prepared for being taken to task for not having introduced those of others further than the course of my own investigations rendered necessary. The letter of Mr. Noble contains three distinct imputations—1, that I have not been candid toward him; 2, that my inferences are, some of them, totally at variance with recognized principles of physiology; and, 3, that the accuracy of my facts is doubtful. He says, "I regret that in assuming to have determined, amongst other things, that taste is a special sensation, Dr. Alcock has not had the candour to refer to what had been previously offered to the profession by myself." Now, sir, were it even so,—were it true that I had not referred to what had been previously offered to the profession by Mr. Noble, still the want of candour is to be proved. Have I either detracted, or attempted to detract, from the originality, the priority, the validity, the propriety, of Mr. Noble's experiments and views? Assuredly not. On this his own showing they remain, so far as I am concerned, untouched in all those respects. How, then, can the charge of want of candour apply to me? Would Mr. Noble imply that the doctrine, "that taste is a special sensation," has originated with him? He disclaims it himself: I have not, then, wronged him there. Would he imply that it was first suggested to me by his papers? Here, were such the case, and I did not avow it, I should certainly have been uncandid; but I can

assure the gentleman that if he thinks so he is mistaken: every tyro in physiology knows that, according to the popular opinion, taste is as real and distinct a sense as any other; and I do not ask too much in claiming credit for the same amount of knowledge. Or would he imply that I have made use of *his* labours without acknowledging the debt? I request that he will show where I have done so, and I will make amends; but if he can not, I expect that he will admit the injustice of his charge. Again, I ask, though I had not referred at all to Mr. Noble or his opinions, where yet was the breach of candour? What was it to me what he or any other man had offered to the profession, if it did not suit my purpose, or if I did not make use of it? And if not, why should I, in the pursuit of my own investigations, refer to it? Am I not at liberty to investigate for myself, and to use my judgment and choose what course I will pursue? And shall I not pursue it unmolested so long as I do not trespass upon that of others? I choose one way, and shall Mr. Noble dictate to me another? Or, cannot one write his own views without violation of candour, unless he bring forward at the same time all the arguments which may have been from time to time advanced upon the subject, whether good, bad, or indifferent? Each man thinks his own the best; and why Mr. Noble should be conceded a compliment above his fellows, I know not. Were I writing a systematic account or history of the question, I should feel myself bound to bring together every thing worthy of preservation, or which I could reach, and I should certainly not omit Mr. Noble's cases and his inferences; but not being in the present case either the chronicler or the trumpeter of any man's opinions, but only seeking after satisfactory knowledge, I did not feel, nor do I acknowledge, any obligation to have occupied my pages, already, perhaps, too much extended, with views with which I was no further concerned than that they tended in the same direction with my own to the establishment of an opinion, to the origin of which neither party had any claim. But, sir, it is not the case that I have "not referred to what Mr. Noble had offered to the profession," for I did refer, when it fell within the limits of my design; and further, when I did so, I acknowledged it; and I have yet to learn what obligation I was under to go out of my way to do so, and to introduce what was not appropriate, inasmuch as the data from which I reasoned were purely anatomical and physiological, while Mr. Noble's data were pathological,—what was already known, since, according to himself, it has been circulated through several vehicles,—and what, it might be, I did not regard in exactly the same light with its author,—what, at least in my judgment, requires to be confirmed, and put beyond doubt, before, to use Mr. Noble's own phrase, he "can be allowed to have determined the question."

But Mr. Noble "claims priority in having demonstrated, by the best kind of evidence, that taste is a special sensation." Well, be it so: assuredly I have not questioned it; and I call upon him to produce, from my paper, any assertion of priority in the matter at all. When I assert such a claim, it will be time to task me with it; but I am not so puerile as to put forward such pretensions with regard to a doctrine which was received of physiologists before I was born;—I only claim to have investigated the question according to my ability: I found two opinions at hand, and I sought to determine, if I could, which was better founded; and if I have succeeded in throwing any additional light upon the subject, I am entitled to Mr. Noble's thanks for having given confirmation to the view entertained by himself, and not to his censure for want of candour.

Secondly, sir, my inferences are at variance with recognized principles of physiology; and why? Because, says Mr. Noble, it is "a recognized principle in the physiology of the nervous system, that a simple and special function must have but one simple nerve for its manifestation." What doth he mean here? One simple nerve? Doubtless a distinct nerve; else his principle is devoid of force as an objection to my inferences. And further, be it observed that the strict interpretation of his principle is, that the manifestation of a simple and special function *can* have but one simple nerve; else, again, there is no inconsistency in my opinion, that taste has two media of perception. Now, where, among our senses, do we find the con-

firmation of this? There is not one of them which is not provided with more nerves than one; nay, there is not one, with the exception, at the most, of touch, in which the co-operation of two nerves, apparently dissimilar, is not required, at least for its perfect manifestation. Smell is not perfect without the fifth nerve. Injure the fifth nerve, and amaurosis is the consequence; and in Mr. Noble's own case of facial paralysis of the fifth nerve, the hearing was imperfect. The inference, therefore, thus far, is not inconsistent. Again: will Mr. Noble please to reconcile with his recognized principle, the fact that, according to the highest anatomical authorities, the auditory nerve is in many fish only a branch of the fifth? Will he reconcile with it his own conclusion—perhaps, to avoid imputation of want of candour, I had better say, though he appears to dislike the word, the suggestion—that the chorda tympani and the other branches of Meckel's ganglion are the nerves of taste? They, too, are branches of the fifth nerve; and their special character he has not proved. Or, again, his own reasoning with regard to the glosso-pharyngeal nerve. According to him, "the simplicity of origin" of that nerve "is not questioned;" and "a nerve whose origin is simple, can subserve one function only." Yet, if he take the trouble to examine the distribution of the nerve in question, he will find abundant reason to doubt its singleness of function. But Sir Charles Bell and other leading authorities decide in favour of Mr. Noble. Be it so; but are there none of a different opinion entitled to consideration? I would suggest to Mr. Noble, even for curiosity sake, to consult the writings of Magendie, and he will find that that physiologist almost goes the length of maintaining that the fifth nerve subserves the three senses of smell, sight, and hearing; also those of Dumeril and Serres, from which he will learn that those authorities are of opinion that, though the dolphin has not got an olfactory nerve, yet that it enjoys the sense of smell through the fifth; and that several animals which are devoid of optic nerves, can yet see by means of the fifth. And further, that Cuvier, who is entitled to some respect in those matters, held "that the difference of the functions of the nerves depends rather upon the different organization of the parts to which they are distributed, than upon their proper essence." Therefore, if the battle is to be fought with authorities, it would seem that they are to be had on both sides, and that Dr. Alcock's inferences might contradict all Mr. Noble's leading authorities, and yet find others to countenance and support them; nay, that they might find authorities in nature—"the best kind of evidence"—to justify them.

Lastly, sir, facts are stubborn things; "but the accuracy of the facts themselves must first be established; and that Dr. Alcock's paper furnishes the proofs of such accuracy, most, I conceive, will be inclined to disallow." This charge I know not how to treat, because it is equivocal and offensive, leaving an imputation upon my veracity, to be understood according to the reader's pleasure; and further, because he adds, "I do not, however, propose to examine seriatim and in detail the various proceedings which were adopted in this gentleman's experiments." And if not, sir, how can their accuracy be decided? or who, without such examination, can pronounce judgment upon them? Mr. Noble, it appears, has ventured to do so. But why not examine, and rigorously too? It is what I desire, and what I have endeavoured to do myself: I do not pretend to infallibility, and I promise, when convicted of error, to acknowledge it. This question I leave to Mr. Noble to answer: I cannot suppose that he would pronounce a judgment which he was unable to maintain.

One obligation, however, I owe to Mr. Noble, and I hasten to acknowledge it. His letter has led me to discover a misconception into which I have fallen with regard to Mayo's repetition of the experiments of Panizza. In my perusal of his paper upon the subject, in a former number of the GAZETTE, I understood him to say that he had divided the glosso-pharyngeal nerve on one side, and the lingual branch of the fifth on the other; whereas, on reference, I find that it is "lingual branch of the same nerve on the other." The experiment, as I understood it, appeared to me inconclusive, and I have said so; but I take thus the earliest occasion to correct my mistake, which I can explain only by the use of the terms "lingual branch," inasmuch as the lingual portion of the nerve is not in the

dog a single branch, but a leash of branches, among which it is not possible to distinguish, in the living animal, those especially intended for the tongue from the rest, and by the habit, which I have for some time adopted, of calling the "gustatory" nerve (so called) simply "the lingual branch of the fifth."—I remain, sir,

Your obedient servant,

B. Alcock.

Dublin, Dec. 26, 1836.

DR. R. WILLIAMS ON FEVER,

AND THE "ELEMENTS OF MEDICINE."

To the Editor of the Medical Gazette.

Sir,

I feel much obliged to the reviewer of the Elements of Medicine for pointing out a typographical error which had escaped me, and in which the word *saved* has been substituted for *lost*. The passage should have been thus:—"The cholera was preceded and accompanied, and followed by, a fever of great severity, and the treatment by enemata in those years has been by no means so successful, one being lost out of four or five."

As the value of the work depends altogether on the soundness of the principles on which it is based, it may not be unimportant for me to state, that we have had this season, in St. Thomas's Hospital, the strongest confirmations of the contagious nature of typhus fever. Early in the autumn, two cases were admitted into Edward's ward, ill of a severe fever, and, in a short time afterwards, four other patients in the same ward were seized with the disease, while the sister and nurse also caught it. The sister suffered very severely, so that many thought it impossible she could recover, and her symptoms were remarkable, for her pulse, which beat the other day at 84, was counted for several days during the fever as low as 32 and 33 in a minute. She* recovered by the use of the enemata, a few leeches to the abdomen, and mustard poultices; but the nurse, an aged woman, died.

The pathological phenomena in two cases that have fallen within the last few weeks, have been strikingly different; for in the nurse just mentioned there was no trace of disease in the alimentary canal, neither was there any injection of the membranes of the brain; and the only morbid appearance found was effusion of serum into the arachnoid cavity; while, in a boy that died in King's ward, the follicles of the colon were generally enlarged and strongly marked, the appearances of the head being also trifling. I should have anticipated the best results from the use of enemata in this latter case, but the patient obstinately opposed their use; and it is singular, he was more affected with delirium than the nurse.

The liberal adversary with whom I have to contend, and who evidently has left the university much later than myself, will, I am sure, not be offended when I state I do not understand his logic. This art has never been made plain to ordinary understandings, and I am quite sure, had Mrs. Glass affirmed "there is but one famous Christmas-pudding known in this country, and that is made of plums," that no power could have persuaded her she had asserted, "therefore, all our puddings are made of plums." The disjunction of the substantive from its adjective, is, I apprehend, unprecedented in reasoning. I certainly am astonished, when every medical authority admits nine-tenths, at least, of the patients labouring under typhus, pass into a brown-tongue stage of greater or less intensity, any doubt can exist that it is a law of the disease, the typhoid poison does not wear itself out, or else the patient does not become insensible to the action of the poison until it has produced the greatest state of depression consistent with human existence; for surely every law is deduced from the great majority of facts, and though rendered less universal, is not superseded by the exceptions. I am also surprised that the "Elements of Medicine" should have been considered as an improper title, and as synonymous with what is usually termed an elementary work. Cullen adopted "First Lines" as the title of his book, although it was the profoundest treatise on medicine then extant. But this great man compared, in his own mind, the little that was known of our vast science, with what remained to be accomplished, and clearly saw his sketch was only des-

* Soda-water, the best of saline medicines, was allowed *ad libitum*, but she could not, after a bottle or two had been taken, be persuaded to persevere, and its exhibition was abandoned.

tined to lead the way to greater discoveries; and the proportions of a child are not more dissimilar to those of the man than is the system of Cullen to the present state of medical science. I believe there is no error, therefore, in the title I have adopted. I reasoned as Cullen had reasoned before me, and had certainly no intention of misleading the public. It is not, however, my intention to prove the truth of the line of Pope—

> "Ten censure wrong, for one who writes amiss;"

but to thank him for his courtesy in attributing the error he has pointed out to its right cause; to assure him the leaf that contained it is already cancelled in the unsold copies; and to add that your kind insertion of this admission of the mistake in your valuable journal, may, perhaps, enable some of those who possess the work to correct it.

I remain, sir,
Your obedient servant,
ROBERT WILLIAMS.

39, Bedford Place,
Russell Square, Dec. 29, 1836.

CASES IN OPERATIVE SURGERY;

WITH REMARKS.

To the Editor of the Medical Gazette.

SIR,

IF you consider the following cases deserving of publication in your journal, they are at your service.

Believe me, sir,
Your obedient servant,
F. C. SKEY,
Assistant-Surgeon to St. Bartholomew's Hospital, &c.

Charterhouse-Square,
Jan. 3, 1837.

Removal of a portion of the Lower Jaw.

Mrs. M., aged 56, residing at Wimbledon, accompanied by Mr. Tapley, her medical attendant, consulted me in the latter end of September last, relative to a diseased condition of the lower jaw. On examination, I found the walls of the bone on the right side considerably separated by a morbid growth of a somewhat remarkable character, occupying the situation of the molar and bicuspid teeth. The extreme breadth to which those walls were separated was about an inch, which rendered her cheek prominent. Both the inner and outer gum were more than usually vascular and tumid, and pressure on either occasioned pain. The teeth had been either removed or had come away spontaneously, at a date of many years antecedent to the first appearance of the disease. The alveoli were occupied by the diseased growth, which, apparently arising from their base, extended upwards to the level of the swollen gum, in the form of thread-like processes, terminating either in rounded or acuminated extremities; the whole possessing a sort of verrucous or cauliflower character. The disease extended beyond the original situation of the last molar tooth posteriorly, and reached, in the direction of the symphysis, the first bicuspid.

No other structure appeared to be involved, and the basis of the bone, as likewise the cervical glands, were to all appearance healthy.

The disease had existed about six months, and was attended by considerable darting pain, recurring at irregular intervals, which increased to a degree sufficient to occasion sleepless nights and generally impaired health. The slightest violence produced bleeding from the tumor, not always readily controlable; and this symptom was likewise on the increase at the date of her visit to me.

I had no doubt, on inquiry and examination, of the necessity of its removal; and being unwilling to undertake a large operation without the concurrence of some professional person, I requested the opinion on the case of my friend Mr. Kiernan, who coincided with me in the necessity of an early operation, although, like myself, he was uncertain of the precise nature of the disease.

I performed the operation on the 29th of September last. I had previously seen several similar operations for the removal of the half of the lower jaw, but in each an incision was made, which appeared to me in some degree objectionable, viz. that of the cheek, commencing at the angle of the mouth, and extending outwards to the masseter muscle. This, for reasons I shall hereafter state, appeared to me unnecessary

in this case. Having placed the patient in a convenient position, I made an incision from the symphysis to the angle of the jaw down to the bone, and divided the facial artery, which I immediately tied. Introducing the forefinger of my left hand into the mouth, I passed the knife from the wound upwards between the cheek and the gum, which were separated from each other to the extent of the external wound. Without waiting to tie many smaller vessels that were bleeding profusely, I pressed the tongue to the opposite side, and divided the mucous membrane which forms the floor of the mouth and the attachment of the mylo-hyoideus muscle to the bone, with a curved knife, the point of which was supported on my finger below, the inner surface of the bone being the guide for the incision. I had then the whole bone insulated. With a large pair of Liston's forceps, I divided the jaw near the symphysis, which split through without difficulty, and I again introduced them into the mouth, passing them backwards to the angle of the bone, which was in like manner easily divided, and I had the whole diseased growth removed. I then observed the sublingual gland, which was exposed, and as it appeared somewhat indurated, I removed it with one or two strokes of the knife. Many vessels were divided, and the hæmorrhage was considerable. I tied some arteries from the internal pterygoid and masseter muscles, and a branch of the submental. Wet lint was applied to the wound, and the patient was carried to bed.

The operation occupied 11 minutes. In an hour afterwards I removed the lint, and as all tendency to bleed had apparently ceased, I united the sides of the wound by means of two sutures, and requested that wet lint might be reapplied over them.

In six hours after the operation, in consequence of an attempt to speak, such considerable hæmorrhage recurred as to induce Mr. Tapley to divide the sutures and expose the wound. The bleeding ceased, and on the following day our patient was free from pain, and suffering merely from symptoms attendant on loss of blood. There arose no other drawback to her recovery, and she was convalescent in a month after the operation.

A section of the bone exhibited the full extent of the disease, which had apparently commenced in the alveoli, and extended in the direction upwards by the formation of the thread-like processes I have above alluded to. It had likewise extended backwards towards the angle of the jaw, in the form of a whitish, somewhat schirrous-looking growth, which having imbedded itself in the substance of the bone, was gradually producing absorption of its more cancellated texture in this direction.

In reference to its malignant character or otherwise, great uncertainty existed; and it was exhibited to many men eminent in the profession.

Hitherto there has been no recurrence of the disease, and her health is perfectly reinstated.

I conceive the operation performed in this case to possess advantages over those which I had previously witnessed, both immediate and prospective. The operation is more simple. There can be no error as regards the first incision, either as to direction or depth. There is no danger of wounding the parotid duct, nor of making a second division of the facial artery, which is almost inevitable to the other operation. The bone is more immediately under the incision, and consequently more readily exposed, whereas, in the operation commencing by a transverse incision through the cheek, from the angle of the mouth, the diseased bone always lies more or less concealed, unless the incision indeed be very extensive.

Should secondary hæmorrhage occur, as in the above case, it is always preferable to have a direct rather than an oblique wound in the bottom; if not, the blood may accumulate.

If the external wound be immediately over the bleeding vessels, the trickling from the wound would admonish the attendants of the impending evil.

I am aware that much may depend on the extent of the disease, which may involve not only the base of the bone as far as the angle, but even the ramus as high as the condyle or coracoid process; and again, this extent may not be determinable till the operation is advanced. But notwithstanding the possibility of these difficulties, I should prefer the division along the basis, because, under all circumstances, a considerable part of the ramus, probably its inferior half, might be commanded from the lower

wound; and should the disease be found to extend beyond the part exposed, I conceive it would be perfectly unobjectionable to make a division *across* the masseter, which would avoid the otherwise neeessary injury to the portio dura nerve, effeeted by a vertical one.

The prospective advantage is that which arises from avoiding the deformity produced by the division of the face. In the case above detailed, the deformity is so slight as to be almost imperceptible. There remains a slight hollowness of the cheek on that side, but nothing to indicate that so severe an operation had been performed.

Taliacotian or Rhinoplastic Operation.

W. Detheridge, aged 52, called on me about the latter end of August last, with a letter from a medical friend, containing a request that I would examine his face, with a view to the performance of the Taliacotian operation.

The man stated that he had been at various times under the advice of experienced and eminent surgeons, but that all had declined his most urgent request that some attempt might be made to amend his unhappy condition of features attendant on the partial loss of his nose.

There was an earnestness in the man's appeal, almost imploring my assistance, accompanied by the assurance that he could not live to be the object of scorn and derision of all his acquaintance, that induced me to believe that there were some grounds for the suspicion that he was the subject of insanity. On investigating the circumstances attending the case, I ascertained that he had been endeavouring for twenty years to obtain the consent of some surgeon to undertake the operation, but all had prudently declined. He seemed to consider me in the light of a last hope, and employed all his eloquence, of which he possessed a more than ordinary share, to induce me to do that which the *élite* of the profession had declined, and in this he certainly succeeded, but not till I had convinced myself that his eccentricities were referable to too obvious causes to render my refusal inevitable on that score.

I considered the man to possess a large share of personal vanity, and to be exceedingly and morbidly sensitive to any defect which involved his personal appearance.

From the days of his boyhood he had suffered considerable annoyance from the discoloration of his nose on exposure to cold. He complained that he could never keep it at the right tint of colour—warmth reddened, and cold blanched it. With a view to meet the effects occasioned by the variation of temperature, he carried in his waistcoat pocket a quantity of chalk, with which he was accustomed to rub his nose as occasion required.

After a time, however, this expedient failed him, and he made a serious request to a medical gentleman to cut off his nose, and make him another of better materials. On the refusal of this gentleman to accede to his wish, he returned home, and with his own hand cut off the extremity of the offending organ, by an incision which commenced about one-eighth of an inch below the nasal bones, and passed down obliquely to the middle of the lateral cartilages. He then renewed his application to the surgeon, in the hope that all objections were removed.

On the assurance of the man's mental sanity, by two medical gentlemen of the highest professional respectability, who had known him for many years, and influenced by his own urgent entreaty, repeated in defiance of my assurances that the operation would be both a tedious and a painful one, and possibly at last unsuccessful, I consented to undertake it.

The operation was commenced by paring off the skin covering the remaining part of the nose, leaving well defined margins all around. This the man bore with the most stoical indifference, as indeed he did every stage of the operation. He felt himself the hero of the day, with which something of the ridiculous was blended, as though he were paying the penalty due to his previous folly. The bleeding continued from the exposed surface for nearly $\frac{3}{4}$ of an hour, during which time the wound was sponged with cold water, and at length covered with lint, and the blood allowed to coagulate. When the bleeding had ceased, having previously marked with a pen and ink the exact form and dimensions of the skin to be removed from the right brow, and which were in all dimensions more than suffi-

ciently large to cover the surface exposed, I divided around, having a bridle directed towards the root of the nose, of about half an inch in breadth. From this flap, thus almost insulated, sundry arteries from the frontal bled considerably, and one among the largest poured out its blood, *per saltum*, from the point or tongue into which the flap was prolonged, and which was destined for the septum.

Before the flap could be finally adjusted on the nose, more than half an hour was occupied in arresting the bleeding from it, and I was compelled, though somewhat unwillingly, to place a ligature on a vessel that bled most pertinaciously from the side of the bridle. During this process the temperature of the flap became much reduced, and the surface of the nose was again covered with coagula. These being carefully removed, the flap was turned at the bridle and laid down over the nose, which it was found to fit accurately.

Fine sutures were introduced down each side, at a distance from each other of about one-third of an inch; and, finally, I fixed up the tongue of the flap by two sutures passed across it, through its bleeding surface, and carried through the lower edge of the old septum: these two last, therefore, did not penetrate the skin.

The time occupied by the operation itself did not exceed twenty minutes, although the man was under the hands of his attendants for fully as long a period as I had anticipated. He had a slight attack of erysipelas in the following week, but notwithstanding this the integuments united perfectly. In one or two places, a groove was left between the old and new surfaces. These defects I have subsequently amended by removal, at the same time with a view of reducing the necessary bulk of the organ within moderate dimensions, and in this I think I have succeeded.

For six weeks after the operation, all the external sensations of the new organ were referred to the forehead, and to the exact spot which corresponded to the part touched. These, however, ceased the moment I màde a division near the root of the nose, for the purpose above alluded to, and they have not returned. The man is proud of his new acquisition, and I do not regret being the agent of his possessing it. As the beauty of the nasal organ must ever continue a matter of taste among the community at large, I cannot speak of its relative merit in this instance, but a man has probably the best right to appreciate his own; and he, being a vain man, is pleased, so I am satisfied; and perhaps I may venture to add, that general report speaks favourably of it.

The great difficulty, I imagine, in cases of this kind, arises from the dissimilar character of the integuments employed, to those for which they are substituted. It is impossible, by a single operation (at least the attempt would in all probability fail), to form a nose of natural dimensions from the forehead, because the integuments of the nose and face generally are thin, whereas those of the forehead are of more than ordinary thickness. Indeed, under any circumstannes, I presume that considerable thickness would be required to insure circulation of the blood.

In the above case I have succeeded to some extent in reducing the portly character it at first possessed, by means of a pair of forceps constructed for the purpose of obtaining lateral pressure, the two blades of which are curved to fit the nose. It appears to me impossible to complete an operation for making an artificial nose at "one sitting;" the margins must be more or less abrupt, and the bulk large. In the above case I have reduced this by two or three subsequent operations, in each of which I have removed considerable portions of the new integument; and we are thus enabled to make a cleaner adjustment of the two edges, between which the former cicatrix should be included. Considering the motives for the operation, I do not imagine that any obstacle to these pruning incisions would arise on the part of the patient.

As so much depends on the exact apposition of the opposing surfaces, it appears to me that in this, as in all operations on the face, too much care cannot be bestowed in accomplishing this object. I am myself in the habit of applying, in addition to one or two large, several exceedingly small sutures, to the purpose of attaining the desired end; these latter, however, I generally remove within about 30 hours after the operation.

ON THE

HEIGHT OF THE DIAPHRAGM.

To the Editor of the Medical Gazette.

SIR,

ONE of the most singular discoveries, to which I have been led in connexion with certain researches into physical signs, is the utter *practical* ignorance generally prevailing among the medical men I have conversed with, as to the height at which the diaphragm is situate in different individuals.

Some there are who can, with a tolerable approach to accuracy, state from books or lectures its average height, but who start with surprise, if not with fear, when its real height in their own case is pointed out to them. Others, with scornful incredulity, draw from their own imperfect knowledge of this point arguments to invalidate the accuracy of signs which I have, in the presence of competent judges, put to the test on the living or the dead, or in both these states.

This ignorance is the more remarkable, as it is not confined to mere tyros in medicine, but extends to men who have been long and successfully engaged in the study of morbid anatomy.

It is not my present business curiously to inquire into the means which the great authorities on percussion and auscultation must be supposed to be in possession of, in order to give them a facility and precision of diagnosis which seem to be scarcely compatible with a want of knowledge as to the height and different degrees of obliquity of the diaphragm in the cases that come under their notice.—I remain, sir,

Your obedient servant,

EDWIN HARRISON.

Dec. 31, 1836.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Pharmacopœia Collegii Regalis Medicorum Londinensis. 1836. Printed by Order of the College.

IN our number of the 24th ult, we noticed the appearance of the New London Pharmacopœia, and we propose now to offer a few remarks on certain portions of it. We have already stated that many new and valuable remedies have been introduced, and, so far, much service has been rendered to medical science; but as we are "nothing if not critical," we shall proceed to point out several objections which occur to us: and first we must say, that, considering the length of time the work has been in preparation, a list of "*Errata* and *Corrigenda*" ought not to have been necessary. Yet both in the octavo and small edition we find one: a convincing proof of inexcusable carelessness, more particularly as the principal errors are not attributable to the printer. For the credit of the College, it had been wiser, in our opinion, to have cancelled the leaves requiring correction, and which might have been effected at a very trifling cost.

In the Preface, allusion is made to the attempted production of a British Pharmacopœia—that is, a joint Pharmacopœia for England, Scotland, and Ireland. The failure of this laudable attempt is ascribed to the great distance of the parties from each other; which, however, we cannot admit to be a sufficient reason, and we cannot but suspect that other difficulties, of an entirely different nature, have also operated in preventing this desirable consummation.

Articles struck out.—In the "Materia Medica," we observe that a few articles contained in the former edition are now omitted—namely, Fucus vesiculosus, Helleborus fœtidus, Linum catharticum, and Rubia tinctorum. Many other substances, in our opinion, might also have been left out; as Oxalis Acetosella, Rumex Acetosa, Acorus Calamus, Malva sylvestris, Cardamine pratensis, Cydonia vulgaris, Laurus nobilis, Allium porrum, Ostrea edulis (*Testæ*), Tussilago farfara, &c.

Articles introduced.—Under the head of "Materia Medica," we observe the following new remedies:—Barytæ carbonas, Brominium, Chimaphila corymbosa, Creasoton (described as "Oxy-hydro-carburetum ex oleo pyroxylico paratum"), Diosma crenata, Ergota (Acinula clavus), Ferri percyanidum (commonly termed Prussian blue), Iodinium, Lobelia inflata, Strychnos Nux vomica, Cissampelos Pareira, Phosphorus, Potassæ chloras, Potassii ferrocyanidum (the prussiate of potash of the

shops), and Helonias officinalis (Sabadilla).

Among the "Præparata et Composita," the following are the principal new articles: — Acetum Cantharadis, Acidum hydrocyanicum dilutum, Acidum phosphoricum dilutum, Aconitina, Morphia, Morphiæ acetas, Morphiæ hydrochloras, Quinæ disulphas, Strychnia, Veratria, Carbo animalis purificata, Argenti cyanidum, Barii chloridum, Calx chlorinata, Hydrargyri bicyanidum, Hydrargyri iodidum et biniodidum, Plumbi chloridum, Plumbi iodidum, Plumbi oxydum hydratum, Liquor potassæ effervescens, Potassii bromidum, Potassii iodidum, Liquor Potassii iodidi compositus, Liquor sodæ effervescens, and Liquor sodæ chlorimatæ.

Botany.—In the botanical department of the Pharmacopœia, we find the words *bulbus*, *rhizoma*, and *cormus*, have in several places been very properly substituted for *radix*; which, in the last edition of the Phrmacopœia, was applied indiscriminately to several vegetable organs. This term is still employed to designate the officinal part of Veratrum album, but a superficial examination of this substance will convince any one that it is not applicable. The word *fructus* is properly introduced in several places where, formerly, the term *semina* was employed; as in Anethum, Anisum, Coriandrum, &c.

Jalap root is declared, on the authority of "Don, MS."! to be the produce of Ipomœa Jalapa. Now it is several years since the plant yielding jalap was described by an American botanist, and declared to be a species of Ipomœa, which he named I. Jalapa. The account has been noticed by almost every recent pharmacological writer, English, French, German, and American. "In the year 1827, Dr. John R. Coxe, Professor of Materia Medica in the University of Pennsylvania, received, directly from Xalappa, several small jalap plants, in a growing state; and having placed them in his garden, succeeded in raising one with all the parts necessary for a decision upon its botanical character. Mr Nuttall, to whom it was exhibited, had no hesitation in pronouncing it an Ipomœa, and described it with the title of Ipomœa Jalapa *." It is, therefore, somewhat surprising that the College should give Mr. Don the credit of discovering the true jalap plant, which is justly due to Mr. Nuttall, and that they should prefer quoting manuscripts to published papers.

Ergot of rye is assumed by the College to be a fungus, and is named "*Acinula clavus.*" In the present state of our knowledge with respect to this product, this decision, to say the least of it, is premature- Botanists are far from being decided on its nature, and one of the latest writers on Fungi (Rev. M. J. Berkeley, in Vol. V., Part II. of Smith's "*English Flora*,") says, "It appears to be only a diseased state of the grain, and has scarcely a sufficient claim to be admitted amongst fungi as a distinct genus. The only way of deciding the point would be to institute inquiries as to the manner in which it commences its growth, as Brongniart has done respecting *Uredo Segetum*. The external coat is subfarinaceous, and very different from any thing I have seen in *Sclerotium*."

Rheum palmatum is still retained in the Pharmacopœia as the mother-plant of the rhubarb of the shops, though the statement is supported by very slender evidence. The principal argument in favour of the dictum of the College, is, *that of all known species* of Rheum, the palmatum yields a root which agrees best with our officinal rhubarb. But it is well known that the Bucharians declared to Pallas they were unacquainted with the leaves of Rheum palmatum, and described the leaves of the true rhubarb plant as being round, with a few incisions on the margin. Sievers also, who travelled four years in the rhubarb countries, decides against the R. palmatum. Moreover, the root of cultivated specimens of this species is always found to differ considerably from the rhubarb imported, though these differences are usually ascribed (without sufficient foundation, however) to climate, soil, &c. Our opinion is, that the true rhubarb plant, or probably plants, are yet unknown.

Three species of *Cinchona* bark are mentioned — namely, *C. cordifolia*, *C. lancifolia*, and *C. oblongifolia;* and

* The Dispensatory of the United States of America, by G. B. Wood, M.D., and F. Bache, M.D. 1834. For further information, consult *Journal de Chimie Médicale*, tom ix. and x. (for the years 1833 and 1834), in which will be found a drawing of the plant; also the last edition of Guibourt's *Histoire Abrégée des Drogues*.

they quote as their authority Mr. Lambert's work on the genus Cinchona. We presume that the College intend, by the above names, to designate the barks known to druggists by the terms *yellow*, *pale*, and *red bark*.

To the assumption of the College, that the *Cinchona cordifolia* yields yellow bark (that is, the bark employed in the manufacture of sulphate of quina), we reply, there is no evidence in its favour. Mutis, indeed, says that the bark called by the Spaniards *Quina amarilla* (that is, *yellow bark*) is obtained from Cinchona cordifolia; but it must be recollected that the terms yellow, pale, red, orange, &c. applied to barks, are merely relative; and we ought not to infer, that because a bark is called yellow in one country, it will necessarily have the same acceptation in another. That the *Quina amarilla* is not *our yellow bark*, and that the Cincho cordifolia does not yield this latter, we think the following facts sufficiently testify:—

1. "Many authors (says Guibourt) yet attribute the *true calisaya*," the name by which our yellow bark is usually known in France, "to Cinchona cordifolia, in consequence of Mutis having given the name *yellow cinchona* to the bark of this tree; but the authentic specimens of the 'yellow cinchona' of Mutis, brought by Humboldt, prove that this bark is that known in France by the name of *Quinquina Carthagène;* quite different to the Calisaya bark."

2. Bergen, a distinguished German writer on the Cinchona barks, had access to the collection of Ruiz; and he thus speaks of the *Quina amarilla*:— "The pieces found in this collection marked as *Quina amarilla* (*C. cordifolia*, Mutis), consist of some flat pieces and some fragments of quills, which are quite identical with the foregoing, described hard *Flava*" (the *China flava dura* of Bergen is, as he himself states, and as we can prove, the Carthagena bark of English commerce); "and there cannot be the least doubt remaining that the *C. cordifolia* is the mother plant of the *China flava dura*."

3. The Cinchona cordifolia grows in Colombia, in the mountains of Santa Fe de Bogota, Loxa, and the ancient kingdom of Quito. Now the commercial outlet for Bogota, Quito, and the neighbouring parts, is Carthagena *, from which place is exported the bark termed in English commerce *Carthagena bark* (by the Germans called *China flava dura*), and which is declared, by the united testimonies of Bergen and Guibourt, to be the *Quina amarilla*, said by Mutis to be the produce of C. cordifolia; whereas the bark called by our druggists *yellow bark*, and from which sulphate of quina is procured, is produced most abundantly in Bolivia (formerly Upper Peru), in the province of La Paz (more than a thousand miles south of Bogota), and is usually exported from the ports on the western coast of South America on the Pacific, though formerly it was also shipped from Buenos Ayres. "We have been informed," say Drs. Wood and Bache, "by gentlemen who have been long personally engaged in commercial transactions upon the Pacific coast of South America, that the Calisaya bark of commerce (yellow bark of English druggists) is originally obtained chiefly, if not exclusively, at the Port of Arica, whither it is brought from the interior provinces of Bolivia."

To this testimony we beg to add the following: during the last week we examined the import book of one of our wholesale druggists, and found that nearly all the yellow bark brought to this country for some years back was exported from Arica, Valparaiso, and Lima, and that none came from Carthagena.

We cannot conclude these remarks respecting yellow bark, without quoting the following passages from the Dispensatory of the United States of America, decidedly the best work of the kind yet published in any language. "Authors are by no means agreed as to the particular species which yields Calisaya bark. Some, influenced simply by its officinal title of yellow bark, have attributed it to the *C. cordifolia*, because Mutis gave the same name to the product of this species. The British Colleges have fallen into this error, without, however, being aware that the yellow bark which they adopted as officinal was really the Calisaya. That it is an error, has been fully demonstrated, as no *Calisaya bark* is brought from those regions where the C. cordifolia most

* See the work entitled "*Colombia*," published (anonymously) in two vols. 8vo. 1822, p. 293, vol. i.

abounds * *. A curious mistake on this subject is made by Dr. A. T. Thomson in his Dispensatory. Considering the C. lancifolia as undoubtedly the origin of the *pale bark*, and at the same time receiving, without hesitation, the assertion that the *Calisaya* is the product of this species, he has inferred that the two must be identical, and has, therefore, given Calisaya as one of the synonymes of pale bark; while he has accurately described the true *Calisaya*, but without naming it, under the head of C. cordifolia or yellow bark."

Neither do we believe it to be correct to ascribe red bark to *C. oblongifolia*. Mutis, indeed, states that this species yields "*Quina Roxa*" *(red bark)*; but this Quina Roxa has been found by Bergen and Guibourt to be a new kind of red bark, called "*Cinchona nova*." The red bark of European commerce is termed by the Spaniards "*Quina colorada*," and we believe the origin of it is unknown.

Want of space prevents us from entering so fully into the examination of the source of red as we have done with respect to yellow bark, and we must therefore refer those interested in the inquiry to the works of Bergen, Guibourt, and Drs. Bache and Wood. We may add, that as Mr. Lambert does not pretend to an acquaintance with the characters of the Cinchona barks of commerce, his work on this point can be no authority; though his collection, in the hands of an able pharmacologist, might be of considerable service.

Kino is still declared in the Pharmacopœia to be the produce of *Pterocarpus erinaceus*. That this is erroneous is proved by the following facts:—Kino is brought to us from the East Indies,—especially from Amboyna; whereas Pterocarpus erinaceus is not found in the East Indies, but is a native of Senegal, in Africa. Moreover, we have in our possession African kino (possibly the produce of the P. erinaceus), but its physical characters are quite different from the kino of commerce.

Copaiba is said to be the produce of Copaifera Langsdorfii; but it is well known that the commercial article is obtained from many species of Copaifera: Martius enumerates nine,—Nees Von Esenbeck, fourteen.

Many other articles of the materia medica were marked by us for notice, but those already examined have taken up so much space, that we are under the necessity of here closing our remarks on the materia medica; and in a subsequent number we propose examining the chemical portion of the Pharmacopœia.

Micrographia: containing practical Essays on Reflecting, Solar, Oxy-hydrogen Gas Microscopes, Micrometers, &c. By C. R. Göring, M.D. and Andrew Pritchard, Esq.

The use of the Microscope has of late done such signal service in the advancement of minute and pathological anatomy, in the discovery of so many otherwise invisible tribes in the animal kingdom, and in displaying so variously and so beautifully the perfection of nature, even in what might seem the most insignificant of her works, that it is not surprising there should be so prevalent a desire among all classes of society to become more intimately acquainted with the instrument. To inquirers in medical science the microscope has become indispensable; nor is it possible to appreciate the labours of Ehrenberg, Raspail, Owen, and divers others, who have, in some sense, opened and described a new world to us, without being more or less adepts in microscopical study.

The scientific public are indebted to the authors of the work before us, for much aid in promoting their means of optical research. In the "Microscopic Illustrations" and "Cabinet" they have supplied abundance of valuable hints for practice: nor will it be found that they are a whit less practical or useful on the present occasion. Dr. Goring exhibits his skill in treating popularly the intricate subject of reflecting and solar microscopes, and the methods of ascertaining the comparative merits of microscopes and engiscopes. Mr. Pritchard gives an interesting account, historical and descriptive, of the oxy-hydrogen instruments (the first we believe that has been published), and has added several practical suggestions which cannot fail to prove valuable. A letter in the Appendix "on making drawings of microscopic subjects" from Mr. Bauer, will be read with interest; it is illustrated with figures, as indeed the work is throughout with excellent wood-cuts and engravings. The authors, we think,

have conferred a boon on the votaries and admirers of the microscope: and who is not at least an admirer of an instrument which has achieved such triumphs?

MEDICAL GAZETTE.

Saturday, January 7, 1836.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

CORONERS AND THEIR JURIES *versus* THE MEDICAL PROFESSION.

THE light that medical knowledge throws on the path of justice is, not unlike many other good things in this world, freely enjoyed without much regard to its true value. Like the air itself, which men fail to hold precious, until they happen, some time or other, to be partially deprived of its use, it seems to have come at length to be considered as truly belonging to political, as the atmosphere is essential to physical, existence. Medical men have so long been in the habit of bestowing their services gratuitously in aid of the law, and have in general so readily obeyed, if not anticipated, the call of the magistrate, that there seems to have been formed a sort of tacit compact, implying that the assistance which medical science is capable of affording in difficult cases coming before the judicature, shall not in any case be withheld.

Luckily, however, there is no such compact in reality,—and the profession may be congratulated that there is not; for a persistence in the course just mentioned has, in the natural order of things, led to a position in the route, from which to proceed further, without some new arrangement, would prove, at least to the parties on one side, a grievous hardship. An abuse, in short, has been growing up, and has attained at last so serious a magnitude, as imperatively to require consideration how it may in future be best obviated.

Medical science, in reference to legal, has of late made great strides; and that kind of knowledge required for purposes of civil polity has been diligently cultivated, and may now be almost said to constitute a distinct profession. The ordinary acquirements of the practitioner of medicine or surgery, or both, are in themselves insufficient to fit their possessor for a referee in the great majority of civil and criminal cases; other special attainments must be superadded, if the preservation of character and reputation be an object: nor can this be accomplished without additional study, and the outlay of much money and time.

The necessity for such preparation has been for some time recognized in the profession; and a natural consequence is, the laying a higher value on the assistance which can be afforded to the magistrate and the judge. The increasing demands, too, made on our profession, in quarters where a fair remuneration has been thriftily and meanly refused, have created a reaction, salutary inasmuch as it directs attention to the proper value of medical services.

But the community generally are but ill acquainted with these facts: slowly and reluctantly they begin to learn that medical evidence is a thing which of late the legislature has thought worth paying for; and the information rouses them, as if it announced the levying of a new tax. What shifts and devices have been had recourse to, in order to escape the impost, must be familiar to every observer. How to avoid the trouble and expense of medical evidence, and whether the presence of medical men may not be altogether dispensed with on certain occasions, have been the

grand problems discussed among the rate-paying jurymen forming the coroners' courts.

It is almost needless, after the frequent complaints made by our correspondents, and the daily announcements through the newspaper press, to point out the peculiar position in which medical men are at present placed with reference to their public functions as medical jurists; yet a short enumeration of the particular grievances under which they labour may not be without its use, as it may tend probably to suggest the most feasible remedy.

1. It was once the regular rule to obtain medical evidence at any inquest involving a question relative to the nature of the death; of late the practice is the reverse: medical evidence is only sought in cases of absolute necessity—where there is an utter impossibility of coming to a probable conclusion without it. There is a manifest disinclination on the part of both coroners and their juries to allow medical witnesses to be called; the business obviously may be so much more quickly dispatched without entering into scientific inquiry: besides, there is a fee to be paid, which the majority of the jury, who have it in their power to call or not to call the witnesses, are indisposed to countenance—they being, in fact, rate-payers—contributors to the very fund from which the said fee is to be disbursed. Instances of this narrow, niggardly feeling, are frequently exhibited: perhaps we may take leave to notice one as an example. An inquest was held on the 27th ult., in Ebury-street, Pimlico, before Mr. Higgs. The coroner refused to summon the surgeon who had been sent for to the deceased, and who, from having investigated the circumstances of the case, (death by hanging) was prepared to throw every light on the inquiry. It was obvious, moreover, that but for the drawback of the fee, this gentleman would have been deemed the most eligible witness: the coroner, however, positively refused to summon him; whereupon the surgeon had no alternative but to remonstrate publicly, as he did, and to announce his intention of applying to the Secretary of State for the Home Department.

2. Another meanness to which the late arrangements have led is this:—Whenever the coroner has any kind of pretext for calling on a medical man as a common witness, he fails not to avail himself of it—as he thus has a chance of procuring the necessary information, without a *special* summons, which alone entitles the witness to his fee. We trust, however, that practitioners will be on their guard against this imposition, and that in all such cases, although they be obliged to give evidence as to matter of fact, they will withhold their professional opinion, unless promised the requisite honorarium.

3. There is yet another gross abuse to be complained of, growing, in great measure, if not wholly, out of the late inadequate measures for providing remuneration for medical evidence,—for we have not only to contend with the griping spirit of coroners, jurymen, and overseers, but with the mischiefs entailed by bungling legislators: the coroner, on determining to have medico-legal assistance in cases in which he cannot help calling for it, issues a special summons to as many medical practitioners as he sees occasion to consult; although it is only *one* of the witnesses thus specially summoned who becomes entitled to a fee. This is surely something more than a mere hardship—it is a fraud practised on the members of our profession, which should in no case be silently submitted to. In our present number (p. 554) the nature of the unjustifiable trick thus put upon respectable practitioners, is well exposed by Dr. Ramsbotham; in whose

letter the reader will find a clear exposure of several other points also, connected with this subject.

Lastly, in several instances where medical men have been specially summoned, they have been *refused* the remuneration to which they were by law entitled. But what a remuneration! supposing even that it were in every case promptly and cheerfully paid. A guinea for "giving evidence," and an additional guinea where a post-mortem examination may have been ordered, with or without a toxicological analysis of the contents of the stomach; and should attendance on such terms be declined, a certainty of being mulcted in five pounds sterling! Such are the blessings entailed on us by incompetent and blundering intermeddlers. But we have already sufficiently exposed the circumstances connected with this part of the question.

As to the conduct of coroners and jurymen, in declining medical evidence wherever they can, there seems to be no remedy for it, save in that chastisement which the exhibition of wilful ignorance so richly merits. These people will probably persist in the line they have adopted, until some gross blunder awakes them to a sense of their silly indiscretion. As it is, the coroner's court in ordinary cases is notorious for its precipitate and often nonsensical verdicts; its "temporary derangement," "insanity," "found drowned," &c. have become the butt of well-merited ridicule. But cases may occur, as they often have occurred, where serious injury may be inflicted on accused parties by the rashness of similar awards. Should it prove that such mischief arises through the wilful rejection of medical evidence, we promise, for our parts, not to fail in setting the matter in its proper light; and we doubt not that ultimately, at all events, there will accrue to such conduct its appropriate meed of public indignation.

LATE OUTRAGE AT APOTHECARIES' HALL.

Mr. Charles Penruddock, the medical student by whom the recent assault on the members of the Court of Examiners of Apothecaries' Hall was committed, was brought up on Thursday before Mr. Alderman Pirie. He had been remanded on the former occasion in consequence of the absence of Mr. Hardy, who was confined by the injuries he had received. This gentleman, however, was sufficiently recovered to attend the day before yesterday. No particulars of importance were elicited in addition to those we stated in our last number but one. Mr. Penruddock was committed, and the several parties bound over to prosecute. The trial, on the charge of felony, will take place at the Old Bailey about the end of February.

We cannot allow this opportunity to pass without pointing out the disgraceful system of insulting the members of the Court of Examiners on their way to the Hall, which has been for some time carried on. Certain persons, headed by some of the chief performers at the "Crown and Anchor" meeting of last year, have collected every Thursday, for several successive weeks, at a public-house opposite the Apothecaries' Hall, where they watch the arrival of the members of the Court, and insult them by the use of the most opprobrious, and sometimes of the most blackguard and disgusting epithets. We have ascertained the names of two "Grinders," who act as ringleaders, haranguing such individuals as they can get to listen to them, and inflaming their minds against the Examiners by every means in their power.

The circumstances are without parallel in this country; and it is mortifying in the extreme to think that any calling themselves members of a liberal profession should be capable of conduct so much calculated to reflect disgrace upon it. The whole may be traced without difficulty to the working of the "Meade and Wakley" meeting, at the Crown and Anchor, last year. The Worshipful Society ought to apply to the magistrates, as the nuisance has become quite intolerable; and it is a duty they owe to the public not less than to themselves, to have it effectually abated.

RECENT DISTURBANCE AT ST. THOMAS'S HOSPITAL.

On Tuesday last a true bill was found against the gentlemen implicated in the late disturbance at St. Thomas's Hospital. The parties (we forbear at present to mention the names) are to be tried at the next sessions.

It is impossible not to regret, on many accounts, the occurrence of this most discreditable affair. That some of the Guy's students acted with unwarrantable violence is quite obvious; and it would, therefore, have been more judicious to have endeavoured to deprecate, rather than incense, those in whose power they had placed themselves in a moment of youthful impetuosity. As it is, the event has assumed an aspect most formidable as regards the young men themselves, most injurious to the interests of the school, and most distressing to their friends. Some of the young gentlemen have had very bad advisers; and the part taken by the *Lancet* has done them infinite mischief. It never is either wise or manly to justify what is wrong,—even if that wrong has been committed in the vindication of a right. But how infinitely more unfortunate is it in any one implicated in an affair of this kind to have such a person as Mr. Wakley mixed up in it. Although, in this instance, he may have forced himself upon them, yet, we ask, had not the parties to whom we allude penetration enough to know that his affectation of interest and anxiety for them was but a trick of our roguish contemporary to serve his own purposes? Did they not perceive that the volunteer advocate and adviser is a mere knave, who makes tools of them for his own purpose? Wakley endeavours to identify himself with the pupils even where they may be wrong, in order to gain popularity and to sell a few copies of his journal; but in this instance he accomplishes more, for he gratifies a double animosity, viz. his hatred of both the Borough hospitals; institutions which cannot but be deeply injured if he can goad on the pupils to perpetuate the existing dissensions. As to the rest, no man can be a sincere friend of the students, who adopts that line of conduct which is, of all others, calculated to bring down the greatest rigour of the law upon them, instead of endeavouring to have the angry feelings on both sides soothed, and some accommodation effected.

On the same principle, with reference to the pupil who assaulted the members of the Court of Examiners at Apothecaries' Hall, instead of attributing the act to insanity, or momentary excitement (the only real palliatives), Mr. Wakley actually justifies the deed! and thus provokes the Worshipful Society to let the law take its full course against the delinquent. He says that it is not known what provocation the Examiners may have given the pupil,—as if any provocation could possibly justify such an outrage; and in reference to our remark, that *his* inflammatory writing tended to lead young men to the commission of violence, he expresses regret that the merit does not in this case

more immediately and unequivocally belong to him.

"*Unfortunately* (says this worthy member of the legislature), *unfortunately the merit of treating the hags of the Hall with so much justice is not due to us.*"

Nothing can point out more clearly the line of conduct which the *honourable* member for Finsbury would have the pupils adopt. But we earnestly advise them, setting aside all feelings of irritation and exeitement, to consider what is due to themselves and to their friends; and to remember that though Wakley may cheer them on, and call them fine fellows, yet that not all the slang and slander the Lancet ever contained will save them from a single penalty whieh any illegal rashness may entail upon them.

REPORT

OF THE

MEDICO-LEGAL EXAMINATION

OF THE

TRUNK OF A HUMAN BODY,

WHICH WAS LATELY FOUND IN THE

EDGEWARE ROAD,

UNDER MYSTERIOUS CIRCUMSTANCES.

[WE have been favoured by Mr. Girdwoodwith the following full and satisfaetory report given at the inquest. That gentleman, with the permission of the churchwardens, had an opportunity of examining the mutilated remains the day after their diseovery, and was thus enabled to give a deliberate aceount of the appearances.—ED. GAZ.]

The body was tied round with a cord, binding the arms flat across the abdomen, squeezing them deep upon the surface; and in this manner it was stuffed into a bag. The bag was very dirty, and of a very eoarse texture, not closely stitehed together at the edges; there were shreds of wood-shavings clinging to the rugged edges of the seams, principally mahogany, and the bag was mueh saturated with blood at its lower part.

The body was headless and legless.

On measuring the trunk, its length from the posterior spinous process of the seventh cervical vertebra to the point of the coccyx is 24 inehes; in front, measured from the superior edge of the sternum to the inferior edge of the symphysis pubis, it is 21 inches. The skin is fair, and a considerable layer of fat exists under it throughout. There is an unusually small quantity of hair, of a light colour, on the pudenda; the pudenda want their usual external development. There is a slight ecchymosis, about the size of a pin's head, on the right labium. The earuneulæ myrtiformes were apparent, and a slight abrasion was seen at the posterior edge of the vagina. The breasts are somewhat corrugated on the surfaee, the skin not now being so much distended over them by the plumpness beneath, as at an earlier period of life it must have been: there is no hair in the axilla. There is not the development of the nipple, nor are there the striated marks on the surface of the abdomen, nor does there exist any separation of the recti muscles, indieative of the female having ever been pregnant.

The hand is a full woman's size, and dirty; there is no mark of needlework on the left fore-finger; the mark of a ring exists on the left ring-finger; the nails of the fingers of both hands are blue towards the tips; the left, however, has to that superadded on all four a red streak immediately behind the union of the nail with the flesh; the muscles of the arms were rigidly contracted. The length of the arm, measured from the acromion point to the tip of the middle finger, is 30 inches.

There are no marks of violenee on the body, exeepting on the right side of the abdomen, two inches above the groin, there exists a superficial eut, in a slanting direction, removing the skin an inch and a half. There are no marks of medical treatment. She has not been bled lately, nor blistered.

The head is severed from the trunk anteriorly, about three inehes above the sternum. The fifth cervical vertebra is sawn through, leaving only about the tenth of an inch of that bone.

The legs are cut off immediately under the hip-joint. The cut does not present a ragged appearance. The thigh bone on both sides, about an inch under the trochanter, is sawn from

within outwardly half through, and then broken off. A superficial cut on the left thigh exists, running for three inches parallel to, and about one inch distant from, the one that severs the limb. A similar cut exists on the right side of the neck.

On opening the body, the viscera presented generally this remarkable appearance — they were completely exsanguinated, no congestion in the lungs, no coagula in the heart, no blood flowed, nor were there any bleeding points in the liver, or the spleen, when cut into. All these organs presented a healthy appearance, excepting one or two points of adhesion observed on the pleura, the result of some long preceding inflammatory action; there was no effusion in its cavities. The stomach was about a third part filled with fluid and half-digested matter; pieces of meat could be detected, a little pastry, and it had a slightly spirituous smell. In the smaller bowels was a considerable quantity of the pultaceous matter called chyme, and from them could be traced, proceeding along the mesentery, the lacteal vessels filled with chyle. The surface of this portion of the intestinal canal had a slight purplish blush on its outer surface, and there was scattered over it small dark purple spots. The gullet presented internally a healthy appearance. The bladder was void of urine, and rigidly contracted.

Our attention was now arrested by the remarkable fact, that this female had no uterus. The vagina was about two inches long, and terminated in a *cul de sac*, having a slightly puckered appearance, where ought to have existed the os uteri; the ovaries existed in a fold of the peritoneum, on each side of the brim of the pelvis. The right ovary had a fibro-cartilaginous tumor attached to it, the size of an almond; and the left had a hydatid, about the same size. The fimbriated extremities of the fallopian tubes were not loose, but were matted down to the peritoneum; and tracing their course along the broad ligaments downwards into the basin of the pelvis, they were found to be joined behind the bladder by the round ligaments of either side, proceeding in their usual course from the inguinal ring; and the point of junction of those four ligaments was indicated by a slight fulness, and puckered, flat, longitudinal band, occupying the natural position of the uterus.

Remarks.—The female, from her appearance, is supposed to be between thirty and forty. Her height, on comparing the length of the trunk and the arm with the length of the trunk and arms of two living women, lead me to suppose it to have been from five feet seven to five feet eight; the mark of the ring upon her finger, that she had been married. The appearance of her hands would lead me to conjecture her as a woman engaged in household work. The bloodless state of the body induces me to consider that the mutilation must have taken place shortly after death. The healthy state of the gullet proves that no acrid poison had been taken, and the contents of the stomach and bowels that food had been taken not many hours previous to death. The absence of disease internally, and no marks of medical treatment externally, indicate her death having been a sudden one, and in all probability not preceded by disease. The remarkable peculiarity connected with the sexual formation of this female, will go far to establish her identity. This woman could never have been subject to the periodic illness of her sex. Taking every circumstance into consideration, I repeat that I think the death must have been a sudden one. Had this sudden death been natural, it must have been by apoplexy; and supposing that to have been the case, still the throat must have been cut shortly after death, to account for the bloodless state of the viscera.

In addition, I have to state that the stomach and smaller intestines were examined by Dr. Hunter Lane, who found nothing deleterious in them.

Gilbert Finlay Girdwood.

January 5, 1837.

ON THE PREVALENCE OF CALCULOUS DISORDERS AMONG SEAMEN;

IN REPLY TO MR. COPLAND HUTCHISON.

To the Editor of the Medical Gazette.

Sir,

Mr Copland Hutchison has preached a rather lengthy sermon from a short

text. The report of my observations at the Medical and Chirurgical Society was so compressed that it omitted three-fourths of what I said, and did not clearly or exactly represent my statements in some particulars*. In the first place, I disclaimed all idea of putting my *opinions* in competition with Mr. Hutchison's laborious *researches;* but that I had an *impression on my mind* (these were my very words) that men had often been invalided from the service while actually affected with calculous complaints, and who might have repaired subsequently to civil hospitals. I never said that seamen, when known to have calculus, *were invalided and sent to civil hospitals.* How many hundreds have laboured for years with stone in the bladder, and only presented symptoms of bad health, till the sound was introduced and the calculus discovered!

The supposed insult to naval hospital surgeons falls to the ground; or if it can be so construed, I take it to myself, for I candidly confess, that at no period of my naval life would I have undertaken, whether afloat or ashore, the dark, difficult, and dangerous operation of lithotomy, of which the naval surgeon, according to Mr. Hutchison's own shewing, can have no practical experience. But let us see whether there are any apt illustrations of this supposed insult to naval hospital surgeons. Within my own knowledge, two naval surgeons (Sir V. Duke, and Mr. Evan Edwards, one of whom was himself a naval *hospital* surgeon, and consequently jealous of the honour of the staff,) became affected with calculus, and after many years of suffering submitted at last to the knife. But to whose knife? Did they go the Naval Hospital at Plymouth, to be operated on by Sir Stephen Hammick? No. To Haslar, where Mr. Vance (an excellent surgeon) was in his prime? They did not. Did they repair to the Royal Hospital at Deal, in order to give Mr Copland Hutchison an opportunity to flesh his maiden gorget in their bladders? Not they, indeed! They very prudently came to the metropolis, and submitted themselves to men—who had been brought up in hospitals—who had for years been in the *habit of assisting others* in this formidable operation—who had been in the long habit of dissecting the parts concerned in lithotomy—who had been in the habit of teaching anatomy and surgery for years—and who, after all this training, had been in the habit of operating for stone on the living body. How will this portrait apply to the naval surgeon, who, I admit, is a good operator in general surgery? I may not have had the education, the talents, the intrepidity, the ambition, of Mr. Copland Hutchison; but I had a conscience in my breast which would not have permitted me to peril the life of a fellow-creature, by undertaking the operation of lithotomy, which requires years of preparation and practice to effect it *well and safely*—and all for the *doubtful* chance of obtaining some *éclat* for myself. If this declaration be taken as an insult to naval surgeons, it is directed against their vanity, and not their humanity. The art of cutting for the stone cannot be learnt by *intuition* in the navy no more than in any other place; it demands a very long apprenticeship, which few can undergo, even in civil life.

But to come to the statistical question itself. Dr. Gordon suggested, and Mr. Earle and others confirmed, the real cause of infrequency of stone in seamen—namely, the period of life at which they enter and leave the service in general. Mr. Earle stated that the overwhelming majority (more than five-sixths) of lithotomy operations in St. Bartholomew's Hospital were under the age of 12, and above that of 45 or 50 years. The infrequency of stone, therefore, is not peculiar to seamen, but to all people within the above periods, and who lead active lives. As for the diet, the grog, the sea air, the tobacco, and many other alleged causes for this immunity from stone, they are mere creatures of the imagination.

In respect to my friend Mr. Hutchison's suspicion that I had been reading Roderick Random just before I went to the Society, I confess my partiality for that amusing production, and that, had I much dull time on my hands, I am not quite sure that I would not prefer Smollett to Hutchison—I am, sir,

Your obedient servant,

JAMES JOHNSON.

December 28, 1836.

* The report to which Dr. Johnson alludes appeared in the Lancet, not in this journal.—E. G.

NOTE FROM DR. WEATHERHEAD TO DR. JOHNSON.

Royal Med. and Chir. Society,
Dec. 28, 1836.

Dear Sir,—From being much occupied during the last week in preparing to remove my dwelling, I did not see either of the weekly journals.

I write to say, after perusing the GAZETTE, that I was not the "friend" who communicated any thing to Mr. Hutchison on the subject of the debate.

I felt assured that it never was your intention to cast any reflection on that department of the naval service to which you belong; and, indeed, you disavowed the bare idea of it *de plano*.

Very truly yours,
G. HUME WEATHERHEAD.

Dr. Johnson, &c. &c.

P.S.—So far from asserting that men were sent from naval hospitals to civil hospitals for the operation of lithotomy, I distinctly stated that I was present at an operation for stone in Haslar Hospital, the patient being a gunner of a ship in ordinary at that port.

J. J.

THE MEDICAL WITNESSES' ACT.

ITS IMPERFECTIONS AND INJURIOUS TENDENCY.

To the Editor of the Medical Gazette.

SIR,

As proofs are daily occurring of the Medical Witnesses' Act being misinterpreted by coroners and overseers, as well as by members of our profession, I trouble you with the following notice of two cases that came under my own observation, where it seems the coroners exceeded their power, in summoning more medical witnesses than the law authorizes them to do, and in giving orders for the payment of fees, which in one of the instances has been successfully resisted.

More than a month ago I was requested by my friend Mr. William Pater, of the Commercial Road, to accompany him to the house of a neighbour, whose servant had secretly delivered herself during the previous night of a mature fœtus. Until his arrival the family was ignorant of what had taken place; but notwithstanding the girl's strong asseverations to the contrary, he was convinced she had recently born a child; and after much search it was found. Leaving the infant exactly in the position in which it was discovered, and refraining from any further investigation for the present, he sought my advice. It was, of course, necessary that an inquest should be held; and anxious not to take the entire responsibility of the medical portion of the inquiry upon himself, he wished me to be associated with him.

On the case being made known to Mr. Baker, the coroner for the district, he issued two distinct summonses, one to Mr. Pater, the other to myself, directing us to proceed to the examination of the body anatomically, and to attend at the inquest to be holden the following day. We acted in obedience to the command, gave our evidence before the jury, and each received an order on the overseers of Stepney parish, signed by the Coroner, for the fee of two guineas, as awarded by the Act. When these orders were presented, the parish officers refused to pay more than one, on the ground that Mr. Baker had overstepped his authority in summoning *two* medical men. Mr. Pater appealed to the magistrates at Lambeth-street Police Office; but, as it was a novel case, they declined giving their decision until they had looked over the act of parliament more critically. The further hearing was fixed for last Monday, when Messrs. Hardwicke and Combe, the presiding magistrates, decided that the double order had been issued by the coroner *illegally*, and that the overseers were fully justified in refusing payment to more than one.

Four or five weeks before the inquest just mentioned was held, I was summoned by Mr. Payne, the city coroner, under circumstances very nearly similar. A newly-born child was found dead; suspicions attached to the mother; and the medical man who first saw it being desirous of my opinion, Mr. Payne summoned me before the jury met, directing me to attend and give evidence. Both my friend and myself were examined, and an order for the payment of the fee to each of us was signed by Mr. Payne, and honoured by the parish officers.

Thus, sir, two coroners, both practising lawyers, have, it would appear, misunderstood the power with which the act invests them, and have been led into the error of giving an order for a fee which cannot be recovered if resisted. That Mr. Payne believed he had legal authority for ordering payment to two medical men, provided he thought it necessary to summon two, I gathered from a conversation I had with him at the time I appeared before him; and it was the impression I had derived

from that conversation that induced me to recommend an appeal to the magistrates at Lambeth-street.

This construction of the Act by Messrs. Hardwicke and Combe (and on an attentive perusal of it I am persuaded their decision is correct), may perhaps bear hard on our profession, because it is impossible for any medical man to know whether he is the *only one* summoned, or whether the coroner may not have required the attendance, either through mistake, ignorance, or design, of two, or perhaps half a dozen of the profession; should such be the case, only *one* would receive payment, while each would be liable to a fine of five pounds if he did not attend according to the order. Under the old system,—certainly vicious to the highest degree,—the coroner had neither the power to compel the attendance of a medical witness, nor to punish for disobedience of the summons;—under the present, he may issue a summons to a dozen, having authority to remunerate one only; while at the same time every individual called upon would be liable to be fined if he did not make his appearance. This is surely a bungling remedy for a previous glaring defect.

In another respect the Act is most faulty as regards the wording. It gives the coroner authority to call in the aid of any medical man in actual practice living "in or near the place where the death has happened." And the jury, when assembled (provided they are not satisfied with the medical evidence before them), may require the assistance of as many medical men as they choose to name, without any reference to their residing "in or near" the spot. Thus, on the one hand, the extent of distance implied by the indefinite term *near*, is left to be construed according to the caprice of the coroner or summoning officer; and, on the other, the jury may send for any eminent practitioner from any part of the country, affording him the very liberal fee of two guineas if he attend, and rendering him liable to a fine of five pounds, provided he decline availing himself of their invitation. Indeed, this short piece of legislative enactment is so ill calculated to remedy the evils previously existing, that I quite agree with the magistrate at Lambeth-street Police-office, who said he had little doubt but that in the next session of parliament a bill would be introduced to amend this Act, and place it on a more practicable footing.

One of the alterations I would propose should be, that instead of the words "in or near," a limit of distance should be specified; and that no practitioner should be brought further than five miles from home without an extra fee per mile being paid him, together with travelling expenses at the same rate as is allowed to the coroner;—and another, that the coroner should be authorized to require the attendance of *two* medical witnesses *independently of the jury*; for it is evident that in cases of suspected poisoning, infanticide, and many others, the concurring testimony of at least two professional persons is not only desirable, but should be had if possible.

Provided the Act be left as at present, see what must result. Let us suppose the coroner to direct an analysis of the contents of the stomach before the jury meet; either the medical men summoned to attempt this difficult operation will not think himself competent to do it, or will shrink from the responsibility, and, failing to obey, he will be fined five pounds, or he will proceed to the investigation, assisted by a friend, who will not receive remuneration, and therefore he will lay himself (perhaps unwillingly) under considerable obligation to his friend; or, lastly, he will undertake it single-handed, and necessarily do it imperfectly; for no one will contend that a delicate chemical analysis can be properly performed without competent assistance. His testimony will, in that case, neither be so full nor useful as it might.

Again, suppose the coroner merely issues his summons for attendance, without ordering an inspection of the body; and the jury having met, the medical witness declares his inability to give evidence unless an anatomical examination is made. The jury direct it should be done, and nominate a second gentleman, to whom *they* have the power of granting remuneration. The inquest must be adjourned, probably, till next day; and every body concerned loses much time, which might have been avoided if the coroner could have taken upon himself conscientiously to enforce the attendance of two professional men in the first instance.

It is not impossible, however, that, in such case, the majority of the jury (impanelled against their will, and anxious to make no greater sacrifice than they are absolutely obliged to do, or perhaps not wishing to burden the parish rates with extra fees, they themselves being rate-payers) may decline calling in another opinion, or requiring any anatomical inspection at all. If they are satisfied with doing their duty in a slovenly manner, the coroner has no alternative but to bow to their decision; for however necessary he may consider additional testimony, the law does not empower him to obtain it against the vote of the majority of the jury; and the ends of justice are defeated.

These are some of the inconveniences

likely to arise from the operation of this ill-digested statute. Another annoyance that has been already felt, consists in making the *giving evidence* the *sine qua non* to entitle to remuneration. Medical men have been summoned by the coroner, have been kept waiting for hours in the inquest room, and have at last been told by the jury that they are quite satisfied as to the cause of death, without medical testimony. The practitioner, under such circumstances, cannot claim his fee, and of course it would not be paid.

Both the instances I have noticed above were peculiar, and possessed points of interest in a medico-legal view. In the last, a medical practitioner saw the infant very soon after its birth, while the body was yet warm, and tried to re-animate it by inflating the lungs and other means. Mr. Payne's object in summoning me, appeared to be to learn whether, after these unsuccessful attempts at resuscitation, a *post-mortem* examination would throw any light upon the question whether the child was born alive.

In the other case, it was evident that the infant was expelled living, although it had never breathed, and that it died from bleeding through the umbilical vessels. It was found with its head downwards, in a covered slop-pail, nearly full of bloody water, in which also there were two small coagula and a quantity of indurated fæces. The funis was torn asunder at the distance of eight inches from the umbilicus, and neither was there a ligature around it, nor any appearance of one having been applied. As soon as I saw the mother, I made a search for the placenta; but it was not to be found in any of the cupboards or boxes in the room. Suspecting it might still be in utero, I examined the vagina, and discovered the torn end of the funis, just within the vulva: I removed the placenta from the uterus by the introduction of the hand. It was partially adherent, and almost entirely within the uterine cavity. The whole length of the funis was only 13 inches, and the two lacerated ends tallied most exactly. Although at least eight hours had elapsed between the birth of the child and the extraction of the placenta, there did not appear to have been more blood lost than in ordinary labour.

From the girl's statement, and corroborative circumstances, it seemed that, feeling a supposed inclination to evacuate the rectum, she sat upon the pail for that purpose, when, the child being rapidly expelled, and the uterus strongly embracing the placenta at the same moment, the funis was put violently on the stretch by the weight of the falling body, and the jerk snapped it.

That the child was born alive, I think was clear, from the fact of its body being almost bloodless; the large vessels were completely empty, and the viscera very much paler than natural. There was also a small quantity of bloody matter, exactly such as the pail contained, found in its stomach; a convincing proof that it was not dead before its birth. But as the lungs had never admitted air, the coroner laid it down as a principle, that the child could not be said to have lived *ex utero;* and a verdict of still-born was returned.

I am aware that there is a question among physiologists, as to what should be considered sufficient to constitute a live birth; whether a few tremulous throbs of the heart are enough, or whether the infant must actually have respired; but I cannot agree with the doctrine that, if a fœtus be expelled from the uterus into a fluid in such a manner as to preclude the possibility of its breathing, while the unprotected ends of the broken funis permit the blood to flow out of its body rapidly (supposing the heart to be in action) the single circumstance of the lungs never having admitted air, will warrant us in considering it as still-born.

That the girl did not intentionally murder the child, both Mr. Pater and myself were convinced; but that she was guilty of causing its death by most culpable neglect, I think cannot be questioned.

I am, sir,
Your very obedient servant,
FRANCIS H. RAMSBOTHAM.

14, New Broad-Street,
Jan. 2, 1837.

ON

SELF-SUPPORTING DISPENSARIES.

IN REPLY TO MR. H. L. SMITH.

To the Editor of the Medical Gazette.

SIR,

I SHOULD be very much disposed to allow the letter of Mr. H. L. Smith, which appeared in your last number, to remain unnoticed, but that were it to be so, some who have not paid much attention to the subject on which he writes, might be misled by it. I cannot certainly reply to the "christian charity" of the man who is so liberal in charging his opponents with *prejudices, misrepresentations, moral cowardice,* and the want of "*honest minds;*" these are unanswerable arguments, and I leave your honest correspondent to the full enjoyment of them. To the essential part of his letter I can and will apply myself; for—

"———————— now more bold,
The Tempter, but with show of zeal and love
To man, and indignation at his wrong,
New part puts on."

If I can comprehend him, Mr. S. wishes me to understand that he believes there are two things in existing circumstances very prejudicial to the interests both of the community at large and of the medical profession. The first is, "the dealing in human life on the principle of contract," and the second, "competition." That these are evils we are all agreed; there is no dispute on this subject,—it is on the question of what is the best remedy for them that difference arises; and (though at the risk of being said to want an "honest mind"), I shall endeavour to prove that Mr. Smith has not found this remedy.

My opinion on this subject, sir, is not a "*prejudice*," nor has it been hastily formed. The plan of self-supporting dispensaries, as they are called, because they are *only principally* supported by charity, has now been for some years before the profession; during which I have considered it carefully, and I may add "honestly," for I have had no private end to serve.

If the "*contract system*" be "an evil so great as to be unendurable to Christians," it should be swept away at once—not to be revived in any shape. Mr. Smith, however, notwithstanding his professed detestation of the principle, is endeavouring to perpetuate the evil under another form; for is that which he recommends the less a contract because "the annual payment is four shillings and four pence for an individual," than if it were 200*l.* per annum for some hundreds or thousands? It is the same principle differently applied, and in no degree less an evil than the system reprobated. But Mr. S. will say it is, because, under his plan, the poor man may choose his own surgeon, and may change him if he please. Let Mr. Smith answer this question truly, and then get out of the difficulty it involves if he can. Was he not asked, at the first meeting on this subject at the Newington School House, how many surgeons he proposed should be attached to the institution he recommended for the Southwark district; and did he not in reply say "four or six of the seniors, and that the juniors might become attached to it as they should become worthy of it?" He did make such a reply, and I was indignant at the humbug so glaringly apparent in such a statement, conjoined with that he had just before made, that his plan would enable a poor man to choose his own surgeon; and this, too, was the plan he had the modesty to propose to some 30 or 40 surgeons of a district in which there are between 2 and 300! I, sir, am a junior surgeon; and I could not but feel grossly insulted on being told, as by implication I was told, some seven or eight years after receiving my license to practise, that I was unworthy to attend the poor. The effect produced on my mind by these words of the "friend of his profession," will never be erased from it:—all who were present can bear testimony that I do not misrepresent him. So much for the principle of contract as recommended by Mr. Smith, which is not to be despised, when monopolized by four or six seniors! In what way Mr. S.'s dispensaries will put an end to competition amongst medical men, he does not condescend to inform us: he does say "he has suggested a judicious system of co-operation amongst them;" but how will his plan secure this? What is there in it to prevent the juniors of the profession, thrown upon their own resources by exclusion from working his "judicious system of co-operation," from combining to attend the poor for three-fourths, half, or one-fourth of a penny a week?" "They cannot dig,—to beg they will be ashamed;" but of course they will be nothing loth to follow the example set them by their seniors. I write to you as an individual, but I can assure Mr. S. that the members of the British Medical Association (and I have no doubt the whole of the profession) will duly appreciate the attempts made by him to uphold the dignity and respectability of his brethren by vilifying them with accusations of ruining the poor, by harshly enforcing payment of extortionate charges; and the attempted libel contained in the following passage of his letter:—"The craft is their status, and they are naturally prone to *mystify* and *misrepresent* every attempt to liberate their dens of drugs, dregs, and darkness, from the thick clay with which they are covered." If the animus which caused this nonsensical sentence to be penned be a sample of that with which Mr. Smith would legislate for the profession, the less he meddles with the subject the better; and if his promised scheme is to partake of this spirit, I would strongly advise him to withhold it, if he do not wish to increase the disgust entertained by the mass of the profession at his attempts to vilify and degrade it.

The misquotations and torturings of Dr. Webster's speech require some comment. I need not, sir, tell you, or your readers, that the paragraph so shamelessly applied by Mr. Smith to his dispensaries, was not Dr. Webster's; it was the quotation from the Address of the Southwark General Practitioners' Society, which you had the kindness to publish for me in No. 7 of the present volume of the MEDICAL

Gazette: Mr. Smith *may* not know this.

Mr. Smith "would like to be told, what have Poor Law Commissioners to do with affairs that do not belong to them," (nothing, certainly!) and he goes on to say, that "the Foreign Office would be as much in place giving directions on the parish constabulary, as the Poor Law Commissioners have been in their interfering in this matter at all." This may be very true; but it is a matter of too much notoriety that the Poor Law Commissioners have interfered in this matter, and that very largely too, for Mr. Smith to have the audacity to say they have not. If he have any doubt, let him refer to their recently made Second Annual Report, in which he will find their interference avowed, and a justification attempted. Dr. Webster was then right in saying what followed, as were the gentlemen present in applauding what he said, even if some of them should have been (though I do not admit they were) "surgeons to clubs allowing them considerably less (than 4s. 4d.) per annum for each person." When Mr. Smith was at the Newington meeting, before spoken of, the chairman inquired what was the rate at which clubs were usually contracted for. This rate was said by a surgeon of a club to be very low; but this gentleman forgot to add, what my friend Mr. Howell immediately suggested, that "surgeons in making their calculations for these contracts, also calculate on not having to attend above one-third who may become sick, of those whom they contract to attend if required;" and such is the result practically, that two-thirds of the members of these clubs never call upon the surgeons of them for attendance, but employ their own private surgeons in preference: the great object gained by the appointment of a surgeon to a club being the prevention of imposition by feigned illness, the greater portion of these clubs affording to their members a weekly stipend during illness. But would these be the circumstances of a surgeon of a penny club or dispensary, not having any advantages to offer to its members other than the affording them medical aid when sick? Would they neglect to call upon him for that which they were told they had fully paid for? And by what a payment! Does Mr. Smith, in the simplicity of his heart, really believe, or expect any one else to believe, that this penny a week can be a sufficient remuneration for the skill, time, exertions, and anxieties, of a senior medical man? If so, what may the juniors expect?

It is also important to inquire who are the persons to whom this ill-paid-for attendance is to be given? Will the necessitous poor subscribe to these institutions? Most certainly not, for every penny they can obtain is wanted during health. But, say the Poor Law Commissioners, "voluntary kindness and *charity* will *perhaps* often supply the amount!" If it should, what becomes of the independence of the labourer? And if it do not, what resource has he, restricted as the Commissioners themselves now admit relief to be? Will the improvident join these institutions? No; for they have no thought beyond the present; and they will not easily be induced to pay for what they may never want. In the parish of St. Pancras the plan was tried by nine medical gentlemen of some standing; but they could get no patients: the poor could not, the improvident would not, pay; and the attempt died at its birth. At Portsmouth several medical men tried a similar experiment, and with a similar want of success, from the indisposition of the labouring classes to become paupers. Dr. James Copland was the consulting physician of the present Marylebone Dispensary; and I have been authorized by him to tell my friends that he was compelled to withdraw his name from the institution, in consequence of finding that really poor persons did not come to it, but that the patients were such as ought, and could well afford, to pay their own medical men. These are facts which are better worth consideration than any vague assertions as to the utility of these things: they may be useful enough to those who, by means of them, have got into practices they never could have obtained without them; but it is not by this reason that the mass of the profession will be induced to support them.

What ought to be the remedies for the many existing evils, I am not now disposed to inquire, as this paper has already exceeded what I intended should be its limits: it will have effected its purpose, if the absurdities of Mr. Smith's plan of reform! have been pointed out. At a future time I may be disposed to go further into the subject; until then, sir, I am,

Your obedient servant,
W. Eales.

Southwark, Dec. 27, 1836.

EXAMINATIONS AND CONDUCT OF THE EXAMINERS AT APOTHECARIES' HALL.

To the Editor of the Medical Gazette.

Sir,

Had it not been for the recent outrage at Apothecaries' Hall, I should not have offered any observations on the letter of your correspondent, at p. 428, who is still

designated a "Student," though it appears that he passed his examination nine years ago, and must, consequently, be upwards of thirty years of age.

Being a very old member of the Soeiety of Apothecaries of London, I have been a not inattentive observer of the proeeedings of the Court of Examiners; and I think there are so many eireumstanees in that letter, unadvisedly and ineorreetly stated, that I am induced *now* to make a few comments upon it. Under ordinary cireumstanees, I should have let sueh absurdities find their own level; but as such unadvised and incorrect statements, when inserted in *your* periodical, may be considered as possessing some authenticity, and as they are calculated to make the better-minded class of students, and practitioners in general, think less worthily of the Society of Apotheearies than they deserve, I have determined to point out some of the passages which I think objectionable.

Your eorrespondent, in the first plaee, gives us a very strong opinion respeeting the rejeetion of a eandidate, some time ago, which, he says, was "a positive injustiee on the part of the *Hall*," meaning by that word the Court of Examiners, for the *Hall*, in its collective sense, had nothing to do with the affair. And he founds this opinion upon his own judgment, "for he had the pleasure of seeing him examined twice." Now though I did not hear him examined at all, I feel quite assured that no injustice was done by rejecting him; and I will tell your eorrespondent why. But, in the first plaee, let me ask by whom were these two examinations made? by a *grinder*, who had been preparing him for some time for these examinations? or was it by a disinterested individual, who had only at heart to elieit the actual amount of information and ability which the student possessed?

I am told that it is a very eommon practice with the *grinders*, to tell their pupils, "you will be asked such and sueh questions, and you must make such and such answers:" the pupils, therefore, expect this; and when they find that the examination before the Court takes a very different course—that questions altogether of a different nature are asked, it is not surprising they are unprepared to answer them, and that, in fact, they frequently shew utter ignorance upon subjects of the greatest importanee. Can it, then, be wondered at, when a student has been thus losing his time in preparing for a particular kind of examination, which probably will not be touched upon, instead of gaining a thorough knowledge of his profession—can it be wondered at, that he should find himself rejected?

That this was the ease with the individual in question, there seems to me to be no doubt; if it had been otherwise, the uproar then made would not have been allowed to die away so soon. Why was not a mandamus applied for, as was threatened? — because the young man knew that he had not given sueh answers to the Court of Examiners as were satisfaetory, or eould authorize a mandamus to issue. Or, if any wrong or injustice was eommitted, why was not a complaint made to the Court of Assistants? The Court of Assistants of the Society of Apotheearies, by whom the Court of Examiners are eleeted, would, on application made to them, have inquired into any injustiee or wrong eommitted by any member of the Court of Examiners, and whoever was proved to have aeted unjustly and eontrary to his oath, would unquestionably have been removed from the Court. But neither was the King's Bench moved for a mandamus, nor the Court of Assistants applied to for an inquiry, and why?—simply beeause the candidate *knew* that he had not a leg to stand upon—that his examination was perfectly fair, and even lenient—and that he was most justly rejeeted.

Your eorrespondent afterwards eomplains of the eonduct of the beadle—whether with reason or not, I cannot tell; but this I can tell him, that the beadle, like every other officer and servant of the eorporation, is amenable to the Court of Assistants, and would infallibly be removed from his office upon the requisite proof of his having been guilty of miseonduct. What the author means "by the manner the *Company* * behaves towards students now," I cannot conceive. Has the *Company* ever been applied to on account of, or acquainted with, "the not-over-civil" conduct which has annoyed your correspondent?

He complains that "the names of the Examiners are not known to the world by any seientific works, and by their not being among the heads of the profession." As there are three grades in the profession, of which the apothecaries are content to be the third, I do not know how the Court of Assistants can select any of the heads of the profession to be members of the Court of Examiners; but in the present list of Examiners are to be found the names of two gentlemen who have very much distinguished themselves, both abroad and at home, as army surgeons. There are several who are members of eminent literary and scientific clubs and

* The apothecaries were incorporated by King James I., by the title of Master, Wardens, and *Society* of Apothecaries of London; and the arms, crest, and motto, were granted, by the Herald's College, to the *Society*.

associations; there are two, who, if we may judge from the passages quoted, extracted, and appropriated, from their respective publications, are well known to the profession by their scientific works; and every individual member possesses more than enough of literature and science to raise him high above the *οι πολλοι*.

Your correspondent fancies that the Court of Examiners "cannot keep a candidate back six months, if he is rejected in classical Latin." In this he is miserably mistaken. It was because the Court does possess this power, and because there were so many rejections of candidates, in consequence of their inability to translate Celsus and Gregory, that the Court instituted the preliminary examinations in Latin medical classics. These preliminary examinations are not made before the whole Court; if they were, and the candidate could not pass, he would be prevented by the *Act of Parliament* from presenting himself again for six months. But the examinations take place before two or more members of the Court, in order to spare the pupil, if he cannot translate Latin properly, this six months' rejection. That these preliminary examinations have not answered the intention so well as was expected, I am much afraid; but it is chiefly owing to the malignant influence of the *grinding system* that it has failed, and perhaps greater strictness in these examinations would be useful.

Your correspondent goes on to say, "Should they reform, no one wishes the Worshipful *Company* less evil than myself; but should they continue their oppressive regulations, I shall rejoice most heartily if the University puts an end to their pretensions." Having failed to prove *oppressive regulations*, it may fairly be asked whether your correspondent is duly acquainted with any of the regulations of the Court of Examiners? I believe he is not, but that he argues from what he has heard, and not from what he knows. As to the University putting an end to their pretensions, *he ought to know* that the University has no such power. An act of parliament may, indeed, repeal the Apothecaries' Act of 1815, and may give to the University the power which is now lodged with the Society of Apothecaries and its Court of Examiners; but till parliament does repeal the one and constitute the other, the University of London possesses no more power than does the Royal Medical and Chirurgical Society, or the Linnæan Society, or any other society subsisting only by the King's charter; for, fortunately, the King's charter cannot set aside, or abolish, an act of parliament.

SCRUTATOR.

December 27, 1837.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

December 22, 1836.

George Frederick Adams, Colnbrook, Bucks.
George Frederick Naylor, Batley Car, Yorkshire.
Christopher Jewison, Rothwell, Yorkshire.
William Skilbeck, Astley, Yorkshire.
Edward Cane Jepson, Gainsborough, Lincolnshire.
George Southam, Manchester.
Digory Wayne Sargent, Launceston, Cornwall.
Michael Harris, Hackney.
Thomas Brightman, Spalding.
William James Loch, Newcastle on Tyne.
Arthur O'Brien Jones, Bromley, Kent.
Thomas Fryer Webb, Wellington, Salop.
Thomas Edmund Horseman, Middle Salop.
James Plummer.

December 29, 1836.

John Lister, Doncaster.
Robert Jones, Llanfyllin.
Edward Savage Haviland, Burwash.
Richard Phillips, Haverfordwest.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 3, 1837.

Abscess	3	Hooping Cough	6
Age and Debility	39	Inflammation	16
Apoplexy	3	Bowels & Stomach	4
Asthma	13	Brain	2
Cancer	1	Lungs and Pleura	3
Childbirth	3	Jaundice	2
Consumption	40	Liver, diseased	1
Constipation of the Bowels	1	Measles	7
Convulsions	29	Mortification	1
Croup	4	Paralysis	1
Dentition or Teething	1	Scrofula	1
Dropsy	13	Small-pox	6
Dropsy in the Brain	8	Spasms	1
Dropsy on the Chest	1	Stone & Gravel	1
Fever	3	Thrush	1
Fever, Scarlet	1	Unknown Causes	5
Gout	1	Casualties	6

Increase of Burials, as compared with the preceding week . . 35

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Dec. 1836.	THERMOMETER.		BAROMETER.	
Thursday . 29	from 22	to 32	29·91	to 29·95
Friday . . 30	23	33	29·97	30·04
Saturday . 31	20	33	30·16	30·30
Jan. 1837.				
Sunday . . 1	25	34	30·39	30·37
Monday . . 2	6	33	30·29	30·28
Tuesday . . 3	28	40	30·22	30·20
Wednesday 4	24	36	30·20	30·24

Prevailing wind, till the morning of 2d, N. and N.W.; since W. and S.W.

Generally cloudy till the 1st inst.; since generally clear, except on the 4th. A little snow fell on the 29th, 30th, and 31st ult.

The sudden and great fall of the thermometer on the morning of the 2d, has not been equalled since February, 1830; the rise on the same day was even more rapid. The thaw has continued, with the exception of the night of the 3d, and the quantity of snow is gradually diminishing.

CHARLES HENRY ADAMS.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 14, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XVI.

Births of Children medico-legally considered—Mature *and* Immature Births—*Legal distinctions — Privileges connected with the Birth — Viability in French law — Fama clamosa—Early instances of Maturity—Signs of sufficient Maturity*—Natural *and* Monstrous Births — *Legal Definition of Monsters—Table of all known Monstrosities, with Remarks—Headless and Brainless Monsters—Double Monsters—Parasitical Fœtuses —Supposed case — Transposition of the Viscera — Question of moral peculiarities connected with that state.*

The medico-legal considerations connected with the births of children are numerous and highly important. Births are mature or immature, natural or monstrous, single or plural, præmature or retarded, live or still, legitimate or illegitimate, &c. The determination of the fact in all such cases chiefly depends on medical evidence, and it is easy to conceive how much the result may affect the peace and welfare of families, and the safety and honour of individuals.

Mature and Immature Births.

The terms mature and immature suggest the idea of a certain degree of growth of the fœtus, without any immediate reference to the time at which it is born. Mature has, indeed, another correlative in the term præmature, which includes the latter idea; but with this at present we have nothing to do. By maturity, as compared with immaturity, is implied such a degree of development in the fœtus as is consistent with the power of continuing an independent existence. It may be more or less complete, and in so far recedes from or approaches to the state of immaturity. I have already described the characters which mark the mature infant*, when I also gave an account of the progress of development in the fœtus, up to the attainment of intra-uterine perfection. On that occasion, I used the term in a more strict sense than I shall now do; for, strictly speaking, any thing short of that maturity just alluded to should constitute immaturity; but the limitation now introduced will obviate any charge of inaccuracy. We shall, therefore, inquire what *degree* of maturity is sufficient for extra-uterine life.

Legal distinctions.—It ought to be premised that our laws take little or no cognizance of the maturity or immaturity of the infant at birth; if it be born alive, and not a monster, (and both these facts are understood with great latitude,) it is generally sufficient for every legal purpose. The circumstance of birth merely, confirms in certain cases very important privileges acquired at an earlier date; for an infant in its mother's womb, or *ventre sa mere*, to use the legal phraseology, is supposed in law, for many purposes, to be already born. It is capable of having a legacy, or a surrender of a copyhold estate made to it. It is enabled to have an estate limited to its use, and to take afterwards by such limitation, as if it were then actually born. It takes land by descent, though in that case the presumptive heir may enter and receive the profits

* Lecture iii. pp. 68, 69, present volume.

for his own use till the birth of the child, which seems to be the only interest it loses by its situation. These privileges date from the moment of conception: there are others, chiefly having reference to the protection extended to the infant against the infliction of injuries, (hereafter to be noticed) which commence at the time of quickening. The subsequent birth of the child has in all such cases much influence in modifying the nature of the crime. If the child be born alive, and afterwards die in consequence of injuries alleged to have been committed on it *in utero*, it is murder: it is, however, sometimes, in respect to the charge of infanticide, of great consequence to be able to prove that the child was immature, or not likely to have lived, when a person is charged with having caused its death.

Viability.—In France, both for civil and criminal purposes, it is absolutely necessary not only to determine whether a child has been live born, but whether it has also had a capacity for continuing to live. This is what is called its *viabilité;* and an infant is pronounced *viable* (from the Latin *via*), when it is considered capable of proceeding on the *journey* of life under ordinary circumstances. According to the *Code civil*, concerning inheritances and legacies, the child which is not born viable is placed in the same category as if it had not been begotten. Also, with reference to legitimacy, if a child, born within 180 days after marriage, be declared viable, it may be disclaimed by the husband, provided he was not cognizant of his wife's pregnancy at the time of marriage, nor assisted in registering the infant's birth.

The French law does not define viability: the determination of the fact is therefore left dependent on medical evidence. But it is curious that the French medical jurists are by no means agreed as to what should, or should not, constitute this condition of the new-born child. The definitions they give us are sufficiently vague, and even the latest and most practical of their writers, M. Devergie, after stating the several forms of expression in which the term is defined by Foderé, Capuron, Marc, Orfila, Velpeau, and others, cannot be more explicit than this, that viability denotes "the aptitude for extra-uterine life, characterized by the maturity of the infant, the good conformation of the principal organs of the economy, and the healthy state of those organs at the epoch of birth." Now here are three conditions on which viability is made to depend, each of them affording ample room for discussion. Nor is this all: some of the said jurists hold that the question of viability can only be raised in the case of children that have died; Capuron, for instance, says that as long as the infant lives, it is seized and possessed of its property beyond the possibility of dispute; but that in case of its death, it may become a question whether it was viable or not, in order to determine whether it was capable of transmitting its succession. Others are of a different opinion; yet it appears strange that there should be any mistake in the matter, when the law seems so plainly to indicate that a *living* child may be declared viable or not, not only, as we have seen, in reference to legitimacy, but the succession to property; for a presumptive heir may enter and raise the question of viability while the infant is still living. There may seem, however, one excuse for the view taken of the subject by M. Capuron—namely, that practically speaking, the fact of non-viability can be rarely determined (however viability may) during the life of the infant; and perhaps it would be in any case as unsafe to pronounce a living child to be not viable, as to decide that a wound is absolutely mortal, the individual who received it being still alive, with all those chances of recovery which nature sometimes so benignantly provides, even in the most desperate cases. But to return to the question of maturity.

Instances of early maturity.—Although it is only the infant produced at the ninth month of intra-uterine life that can be considered completely mature, instances are numerous of children born at earlier periods being *sufficiently* mature to run the ordinary course of human existence. The old writers supply us with some very remarkable cases, which ought not to be overlooked, as it is by the weight of facts, and not by preconceived theory, that the question is to be decided. We have Avicenna, Schenck, Spigelius, Valisneri, Ammanus, Diemerbroeck, and others, stating examples of children having lived to adult age, and even to the ordinary limits of human life, though born only five months after conception. Fortunio Liceti, according to Capuron, was born at four months and a half—at five months, according to Kühnholz—yet lived to the age of 79. His father, says Mahon, did not despair of preserving him, though, when born, he was no longer than one's hand; he put him beside the fire (into an oven, as some say), and there kept him in a degree of temperature like that which favours the artificial hatching of eggs. Belloc mentions his having seen a female infant, born about the sixth month, which was only a foot long, and looked like a little skinned rabbit; yet she was carefully fed, and lived to woman's estate. Marshal

Richelieu was recognized as viable by the parliament of Paris, although born only at five months. Dr. Montgomery, of Dublin, states that the earliest cases he has met with were a child born alive at the end of five months, but which only lived a few minutes; and another born at five months and a half, which lived only four hours.

A curious case became the subject of discussion in Scotland not long since. It was a case of early birth, which, coupled with the state of the child, involved matter for scandal among the maliciously disposed. A clergyman had been married to his lady only five months and twenty-one days, when he became the father of an infant—feeble, indeed, and not three pounds in weight—but which by great care was kept alive. It survived birth for several weeks, and may be still living, for aught I know; but its mature appearance was unfortunate for the good repute of the parents: a *fama clamosa* was raised, and various presbytery meetings were held, to inquire and determine how far the clergyman was liable to the charge of having infringed the rules of morality. The character of the parties was luckily good, and there had been nothing like concealment practised: their intended marriage had been approved for months previous to its celebration, and there was nothing to prevent its taking place. When the child was born there was no preparation for it—all were taken by surprise, and nobody expected the infant to live. Under these circumstances, and chiefly moved by the medical certificates produced in evidence, the presbytery decided in favour of the clergyman.

The medical evidence adduced in this case was interesting. Dr. Hamilton, of Edinburgh, was consulted: he could not go to see the child, but sent a statement of his opinion relative to such early births. He said that his own experience was opposed to the probability of a child born in the sixth month surviving; he referred, however, to two cases where children had lived under similar circumstances of premature birth. One of these occurred in 1710, when the wife of a clergyman was delivered of a living child within five lunar months after marriage, and the celebrated Dr. Pitcairn, and two other eminent practitioners, gave it as their opinion that it had been procreated after the marriage of the parents. The other case occurred in 1815, when a married woman gave birth to a living child nineteen weeks after conception, and it lived a year and a half. Beside this opinion of Dr. Hamilton, there was also given that of Dr. Thatcher and Dr. Reid, who saw the child in question, and examined minutely into all the circumstances connected with its birth: these gentlemen certified that it was quite possible that the infant was begotten after the marriage *.

The opinion of Dr. William Hunter, in answer to an interrogatory which was once put to him on this subject, is worth quoting. "A child may be born *alive* at any time after *three* months; but we see none born *with powers of living to manhood*, or of being reared, before *seven* calendar months, or near that time."

It is evident from all this, that the fact of maturity or immaturity cannot be determined by the mere circumstance of the infant being born before or after a certain *time*; but that we must be guided in our decision by the physical characters which we find developed. Children at seven months are often very incompletely mature, although it is an age perfectly consistent with viability; there are also numerous instances of children born at this period, well prepared for the business of life. Professor Chaussier was a seven months' child; George the Third, the most long-lived, and perhaps the most prolific of our kings, was born at seven months, complete; and M. Künholhz mentions his own wife, the mother of nineteen children, as having come into the world at the same early period.

Signs of maturity.—But without referring to precedents and examples which may be readily adduced on both sides, our business as medical jurists can only be properly executed, in reference to the question of maturity, by a careful personal inspection of the infant. We must look to its length, and to what point the middle of the length corresponds: we must observe the size of the head, the growth of the hair, the state of the nails, the colour and texture of the skin, the sebaceous deposit on the skin at the time of birth, and the breadth of the fontanelles. In addition to this, we should attend, in the living infant, to the mode in which the principal vital functions are performed,—those, namely, of respiration, circulation, and digestion. The force and manner of its cries, how it sucks—whether continuously, indicating that respiration through the nostrils is free, or at short intervals, showing that there is a necessity to let go the nipple in order to get breath,—all this should be noticed attentively. Again, from the colour of the skin, the state of the umbilical cord, and the pulse, we may infer the strength of the heart's action. And finally, we can form

* Medical Gazette, vol. xvii. p. 92.

a further judgment of the infant's powers from the appearance of the meconium or first fæcal matter.

Should there be an opportunity of pursuing the inquiry after the death of the infant, the proofs would, of course, be more tangible—especially those respecting the respiratory functions; for it may then be freely observed and tested how much of the lungs have admitted air, and whether any part of them be diseased. But of such tests there will be a better occasion to speak when we come to treat of infanticide.

Natural and Monstrous Births.

In reference to the shape and structure of the infant at birth, a question may arise, consistently with the actual state of our common law, whether it is human or monstrous.

Legal distinctions.—Our law recognizes monsters; such beings, as the possible issue of human parents, are mentioned in explicit terms. "A *monster*," we find it stated in Coke upon Littleton, "which hath not the shape of mankind, cannot be heire, or inherit any land, albeit it be brought forth within marriage; but although he hath *deformity* in any part of his body, yet if he hath human shape he may be heire. *Hi qui contra formam humani generis converso more procreantur, ut si mulier monstrosum vel prodigiosum enixa, inter liberos non computentur.*" Some further limitations of the term are then added—namely, that those to whom nature has given more or less parts than usual, are to be reckoned among the children,—but the increase or diminution is not to be excessive: six fingers or four only on each hand do not disqualify; nor if nature has disabled any members, or distorted them, does this constitute monstrosity *.

Such is the account of monsters given us by the old legal authorities. The merest tyro in physiology at the present day could point out its imperfections, yet it is the law—the law as expounded by the great luminary Lord Coke, and from which no judge would venture to depart without grave circumspection. There can be no question however, but that there is much room for exercising a discretion on the subject, should a case involving monstrosity arise in the courts; and nothing is more likely. It may be raised in a question of tenancy by the courtesy: the right of the tenant rests on the fact of his child having been born alive; but if his opponents can only prove that the said child had not *human shape*, his claim is null.

If a child hath not the shape of mankind, he cannot be heir; but if he hath deformity only, he may inherit. This is in fact the substance of what the law says: but what room is there not in these few words for dispute and litigation! Where does deformity end, and monstrosity begin? Besides, there are various unquestionable monstrosities for which the law makes no provision. "You will ask," says Mr. Amos, "how does the law provide for the case of the Siamese youths, their rights in regard to third parties and to each other?—and how for a person whose face may be inhuman, but may possess reason—say the case, real or supposed, of the pig-faced lady? and probably, medical men may put a number of other instances;—I answer, that the law says nothing more than what I have just read; and that, therefore, if a case of monstrous birth should be brought before the courts, the courts will seek for all the medical information that can be obtained, and will legislate for the particular occasion; only they will not call it legislation, but will pretend to found their decision upon Lord Coke's definition; which definition, by the way, is borrowed from Bracton, who borrowed it from the civil law."

Classification of monsters.—The subject of monsters is one of great interest to physiologists, as it throws much light on the operations of nature in the exercise of her formative energy. For the medical jurist also, monstrous births are occasionally possessed of no small interest, inasmuch as the result of certain civil and criminal proceedings may depend on the evidence which he is enabled to give of their actual state—particularly as to whether they are live or still, in reference to questions of tenancy, or charges of infanticide.

Buffon, M. Geoffroy de St. Hilaire, and others, have formed plans for grouping together the several classes, according to those points of analogy which seem best suited to ground a scientific arrangement. But M. Breschet appears to have been the most successful in the simple but comprehensive scheme which he has struck out. His plan, indeed, seems most practical yet devised, and for that reason is eminently entitled to the attention of the medical jurist. Orfila and Devergie both adopt it, and I give it here nearly in the form in which it has been modified by the latter.

The circumstances connected with each state in reference to viability or non-viability, it will be observed, are subjoined in a separate column, so that at one view we have a collection of all known monstrosities, with the consequences in respect to the compatibility or incompatibility of extra-uterine life annexed to each.

* Coke Littleton, vii. 8. 29 *b*.

Order I. AGENETOUS (*Agenèses*).	Genus 1. Agenesia	Acephalia	Not viable.
		Anencephalia	Some have lived 20 days.
		Congenital dropsy.—1. Of the ventricles of the brain, with deficiency of some of its parts	Death before or at birth.
		2. Of the same ventricles, but with complete development of the organ	Life more or less.
		3. Of the exterior of the brain fully developed	Viable.
		Aprosopia	Not viable.
		Ateloprosopia	Not viable.
		Absence.—1. Of the eyes, eyelids, or iris	Viable.
		Of the mouth	Not viable.
		——— lips, tongue, outer ear	Viable.
		2. Of the epiglottis, penis, scrotum, testicles, vesiculæ seminales, uterus, vagina, some of the ribs, some of the vertebræ, part of a member, hand, the bladder	Viable.
		3. Esophagus, stomach, liver, heart or lungs	Not viable.
		Septum between the ventricles or auricles of the heart—the diaphragm	Viable.
	Genus 2. Diestenasia	Fissures on the mesian line—of cranium, with large encephalocele	Not viable.
		——— encephalocele—less voluminous	Viable.
		Spina bifida, with hydrorachis in the upper part of the spinal column	Life for a few days.
		——— lower down	Life some months or a year or two.
		Fissures of the lips, jaw-bone, tongue, palate, bladder, penis, urethra, womb, vagina	Viable.
		Division of the mesian line of the abdomen, with considerable hernia of the viscera	Not viable.
		Exomphalia, with abdominal or thoracic hernia	Not viable.
		Both the preceeding, in a less exaggerated form	Viable.
		Ecstrophia	Viable.
	Genus 3. Atresia	Imperforations of the urethra, vagina, uterus, mouth, anus, eyelids, membrana pupillaris	Viable.
		——— of the œsophagus and intestines	Not viable.
	Genus 4. Symphysia	Fusion of the eyes—monopsia	Not viable.
		——— of other parts of the body	Viable.
Order II. HYPERGENETOUS	.....	Giants	Viable.
		Persons with supernumerary organs	Viable.
Order III. DIPLOGENETOUS	Genus 1. Fusion	Fused, or united by some parts of the body	Not viable.
		United, with fusion of parts	Not viable.
		United in the upper parts, and separated in the lower	Not viable.
		United below, and separated above	Not viable.
	Genus 2. Penetration	One fœtus containing another, partly or wholly	
Order IV. HETEROGENETOUS	.....	Extra uterine fœtus; or more than three fœtuses at a birth	Viable.
		Albinoes and *chacrelats*	Viable.
		Fœtus with displacement of organs, all, except—displacement (*ectopia*) of the heart, thoracic, with fissure of the sternum, and hernia of the heart	Viable. Not viable.
		——— displacement of the heart, cephalic, or towards the head	Not viable.

Cursory Remarks.

Some miscellaneous observations may be made on certain parts of the table. And, first, of the genus AGENESIA, or deficiency of growth.

Acephalous, or headless monsters. — These constitute a large proportion of the monstrous births usually met with; they are very common in twin cases. Sometimes not only the head is wanting, but the neck; the arms, also, are occasionally deficient, and likewise the chest, the abdomen and legs remaining. In such cases all those organs which ordinarily receive their nerves from the parts that are absent, are themselves deficient. No species of monstrosity so completely excludes the idea of viability.

Brainless, or anencephalous.—The brain may be wanting, while there may, or may not, be a cranium present. A part of the face is commonly also wanting in such cases. When the face is involved in the monstrosity, one or both the eyes are usually deficient, or they are displaced; the nose is altered, &c. Anencephalous monsters scarcely ever live beyond the second day: in general they die in three or four hours; but there are instances of their having survived for twenty days. This must depend upon the portion of the spinal column which is present or absent.

Aprosopia and Ateloprosopia.—Absence, and imperfection of the face, (implied by these terms,) are always accompanied by a very marked deficiency of brain, accounting for the non-viability which attends those conditions.

Absence of mouth, &c.—The absence of various organs, such as the mouth, eyes, stomach, œsophagus, heart, &c., as enumerated in the table, is traceable to some primary defect in the development of the nervous system connected with those organs. The fact of viability or non-viability will depend on the question whether the organs wanting be essential for extra-uterine life.

In the genus *Diestenasia*, (implying separation or un-union) we find spina bifida, or dropsy of the vertebral column, mentioned as constituting a monstrosity. The chances of viability depend entirely on the extent of the disease, and the parts which are involved. Sometimes it is found to occupy the whole length of the column, at other times it is limited to a portion of it. Now when it occurs only in the lower portion, as the lumbar region, it does not necessarily compromise life.

Hernia.—Congenital hernias resulting from disunion in the mesian line sometimes involve not only the viscera of the abdomen and thorax, but, as Beclard has observed, the face and forehead of the infant may be divided, with protrusion of the contents of the cranium.

In the genus *Atresia*, or imperforation, there is but one monstrosity—imperforation or obliteration of the alimentary canal—which proves fatal to the continuance of independent life.

Monopsia.—One-eyed monstrosity is the only species of *symphysia* (or deficient development with fusion) which compromises viability. It is, however, capable of degrees, and the consequences must depend on the extent to which an imperfection of the brain is involved.

The HYPERGENETOUS, or *overgrown* monsters, include the well-known species of giants, and individuals possessed of supernumerary parts. Many remarkable examples are on record, and instances both human and animal are frequently exhibited in public.

Under the DIPLOGENETOUS order, there are many curious examples to be classed—such as Helen and Judith, the Hungarian sisters, who lived to the age of 21, joined or *fused* together at the lower part of their bodies, and having but one anus and one pudendum between them: the Siamese twins, also, who must now be about 26 years of age, and whose peculiar union by a fleshy and membranous band from sternum to sternum, with a common umbilicus, has been well examined, and often described, by anatomists. I might also mention, as another instance, the Indian child, an account of which is given in the eightieth volume of the Philosophical Transactions, which had two heads, one on the top of the other—the upper one being inverted. But, in truth, the examples of this kind are too numerous to admit of, or to need, further detail.

Parasitical fœtuses. — Of that species wherein the duplicature is effected by an original *penetration* — one germ getting within another—M. Dupuytren has given an account of a most interesting specimen examined by him. A fœtus was found in the belly of a lad of 14; it was congenital, and lay comparatively inert until the boy was about thirteen years of age. It then became irritable, and produced inflammation of the surrounding parts; there was a cyst investing it, situated in the transverse mesocolon; this cyst sloughed and opened into the colon, whence pus, with hair and other organic matters, were discharged by stool. The lad at length sunk under it. Dupuytren, on the occasion of recording this example, makes the apposite remark, "that in such cases, so contrary to ordinary experience, while it is the duty of the philosopher, on the one hand, to admit no more than is rigorously proved, he is not, on the other,

rashly to circumscribe the powers of nature*."

Suppose a case,—that the subject of a monstrosity like the preceding were a female, might not the contained fœtus be mistaken for the consequences of impregnation? And how should the medical jurist distinguish? — The absence of the signs of pregnancy, uterine or extra-uterine, would go far to remove doubt; but the chief explanation would be derived from an examination of the embryo itself, when it would doubtless be found to bear evidence of its long sojourn in the place where detected; parts of it, if not all, would exhibit the appearance of being too old and too well developed for a recent conception, especially when the normal state of the uterus and its appendages would be taken into consideration.

I think it unnecessary to occupy your time with an enumeration of those cases in which the penetration is incomplete. The case of the Chinese, A-ke, who had a small parasitical brother protruding from his abdomen, is well known: the model is familiar to all visitors of museums. In the works of Paré, Bartholin, Zacchias, Winslow, and others, similar monstrosities are noticed, but they have no special medico-legal interest.

Of the HETEROGENETOUS monstrosities, examples are sometimes met with which are very striking. In the last two species given in the table—*ectopia* of the heart, with hernia, thoracic or cephalic—the displacement is always fatal; for the heart is merely covered with a thin pellicle, and in other respects exposed.

Transposition of the viscera.—Not so when the displacement is within the chest, and not attended with hernia. There are instances of remarkable transpositions of this kind, where the subject has lived for months, years—nay, has attained the ordinary limits of human life.

Here is a representation of the state of the thoracic viscera in a child which lived

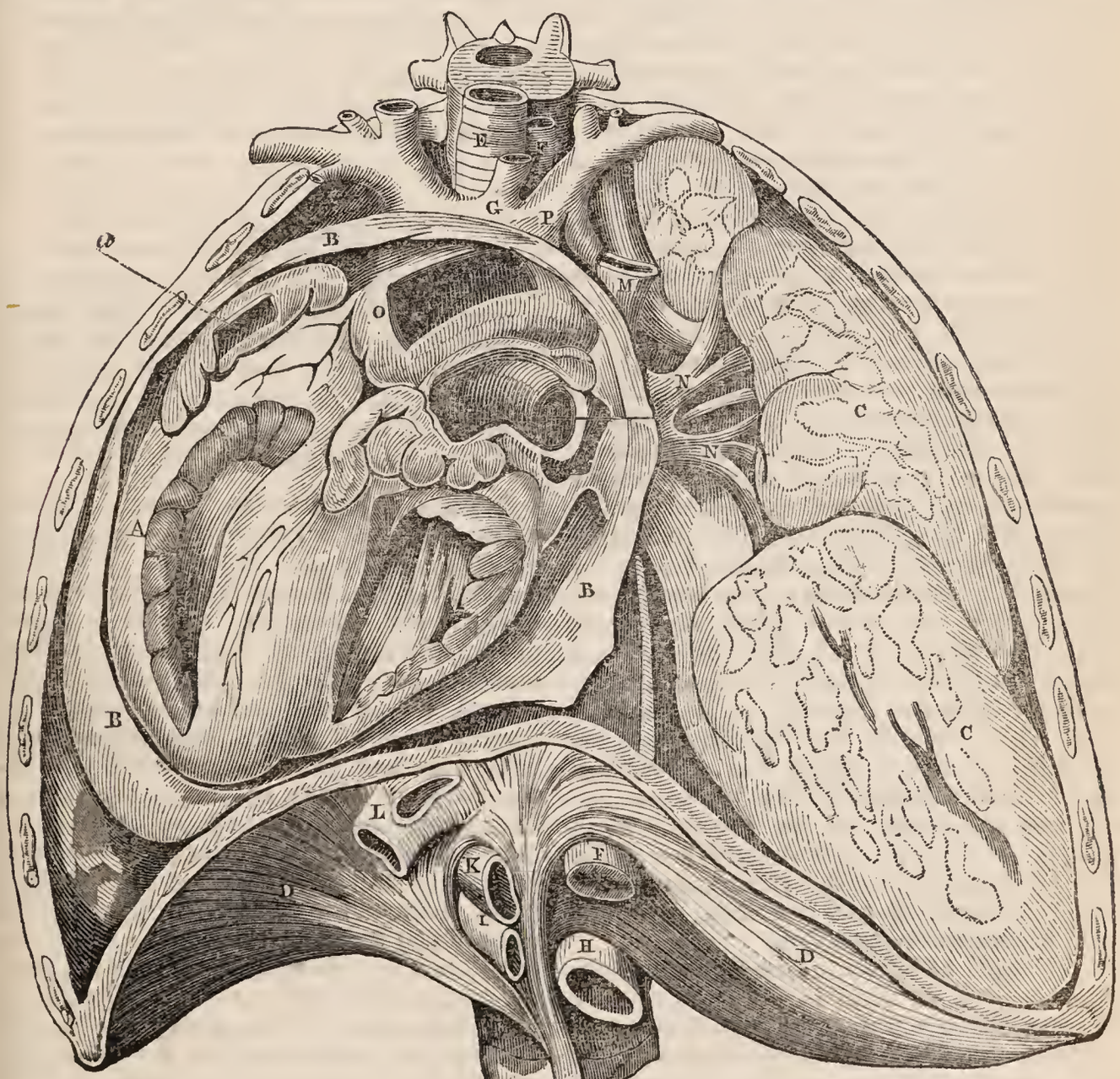

FIG. 20.

A, Heart (*a*, bristle passed through the foramen ovale;) B, Pericardium; C, Left lung: D, Diaphragm; E, Trachea; F, Œsophagus; G, Arch of the aorta; H, Abdominal aorta; I, Artery going to right lung; K, Vein to right lung; L, Vena cava inferior; M, Vena cava superior; N, Pulmonary veins; O, Pulmonary artery; P, Ductus arteriosus, obliterated.

* Bull. de l'Ecole de Méd. prem. part. An. xiii.

for nearly ten months. It was a sickly infant, however, and suffered much in its respiratory functions, apparently from a deficiency of lung: the right lung was in a very imperfect condition. The abdominal viscera were not displaced; but the liver was enormously large*.

In a paper read last season before the College of Physicians, Dr. Watson gave a full account of all the best authenticated examples of transposition of the viscera on record. No less than thirty-three cases are noticed in this elaborate memoir, which you will find full of interest on referring to it: it is contained in the eighteenth volume of the Medical Gazette.

Only four of the thirty-three cases were recognized as such during life; this is partly to be accounted for by the fact that there is nothing in the transposed condition necessarily of a morbid nature, nor requiring medical attendance; and partly that in former days the same degree of care, as at present used in exploring the state of the viscera, was never employed. In future, there is reason to believe that examples of this kind will be more frequently detected; and we shall see, in a subsequent lecture, of how much importance it is to ascertain whether in a given case there be transposition or not, as our diagnosis of wounds must be materially affected by the circumstance.

It was attempted a few years since to raise a theory respecting the moral character of persons thus conformed. It was observed that in a few cases transposition of the viscera was met with in the bodies of criminals anatomised after death, and the conclusion was hastily drawn, that depravity of mind was essentially connected with this *cross* condition of the body. But if Smithers, who was executed in 1832, for attempting to set fire to his house, was found to have this configuration, and if one or two other malefactors were similarly situated, this was far from being a warrant to justify a general conclusion. On the contrary, it so happens that as in most of the well-observed instances on record, there was no change ascertained in the bodily functions, so neither was there in the moral endowments: if any, the balance inclines to the side of goodness: some of the individuals were remarkable for a steady, upright, and benevolent disposition.

I cannot conclude more appropriately than by quoting what Dr. Watson says on the subject:—"More than one of the subjects of this change happen to have been notorious malefactors, and to have ended their lives upon the scaffold; and hence seems to have arisen the fantastical speculation, that as in them the mechanism of the body was crossly modelled, so, by some sinister and mysterious sympathy, the mental constitution also may have been warped and perverted, and the physical prodigy have been necessarily combined with moral deformity.

"If a notion so preposterous could merit a serious refutation, it might be found in the fact that many of the persons similarly fashioned were but little remarkable in their lives, either for good or evil; while one of them, at least, as we learn from the interesting statement of Sir Astley Cooper, was distinguished for active benevolence and kindness of heart, and passed through a long life in uncommon freedom from the vices most incident to her social station*."

* Medical Gazette, vol. xviii. p. 660.

* Medical Gazette, vol. xviii. p. 492.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture III.

Erysipelas in an Epidemic form—Symmetrical spread of Erysipelas on the Body—Maculated Fever, and Irish Typhus—Dr. Lombard's Remarks—Improved Treatment of Fever—Choice of a proper Nurse and Assistants—Air of the Sick Chamber—Necessity of attending to Diet and Nourishment.

I shall now resume the subject of erysipelas, which I alluded to in a cursory manner at our last meeting. You will recollect I mentioned that we had a kind of epidemic erysipelas in our fever wards during the months of August, September, and October; this has now almost disappeared, for we have had but one case during the present month. The disease generally attacked the head, commencing in the scalp, or about the nose and cheeks; but in some cases it appeared first on the nape of the neck, particularly in those patients who had been blistered in that situation during the course of fever. The fever which now prevails seldom abates in less than fourteen or seventeen days; and it was generally about the termination of the febrile excitement, and while convalescence was going on, that the erysipelas appeared. Usually, on the fourth or fifth day of convalescence, a change was observed in the patient, and the erysipelatous attack commenced, being ushered in by a feeling of weakness and uneasiness,

or an indistinct rigor, followed by quick pulse, headache, some increase of thirst, and in most cases by a marked change in the tongue, which became dry and parched. The inflammation was of a superficial character, expending itself almost exclusively on the external surface of the corium, and not affecting to any extent the subcutaneous cellular tissue.

You are aware that erysipelas becomes obstinate, complicated, and dangerous, in proportion as the inflammation spreads inwards. In such cases its characters are less distinctly marked, and it makes a near approach to a very formidable disease—diffuse inflammation of the cellular substance. The affection of which I am now speaking was generally simple, and in most cases limited to the superficial apparatus of the corium. It was characterized by the ordinary phenomena of true erysipelas, namely, redness, heat, a burning sensation, and slight elevation of the affected parts. There was seldom any remarkable degree of œdema, except in some cases where it attacked the eyelids; and we had no instance of abscesses forming under the skin. It was attended with a considerable degree of constitutional disturbance, and the fever generally continued for four or five days. On looking over the cases of this affection, which have been recorded by the gentlemen who had charge of the patients, I find that in most instances the fever terminated on the sixth day. In many cases a peculiarity was observed, to which I have alluded on a former occasion, namely, the spread of the erysipelatous redness in a perfectly symmetrical manner. I believe I was the first who directed attention to the fact, that when erysipelas commences at any point of the mesial line of the body, it is very apt to spread in a symmetrical manner. Thus, in the present instance, the inflammation commenced in the majority of cases about the nose, and then extended in a perfectly symmetrical manner over the forehead and down the neck; or when it appeared first on the nape of the neck, it travelled down between the shoulders with a very remarkable symmetry of extent and outline. Sometimes this precise correspondence did not exist; but I can assert that in more than two-thirds of the cases it was extremely well marked. It appears, then, that this occurrence is not so very rare as my friend Dr. Johnson supposes. When I first noticed the fact of the occasionally symmetrical spread of erysipelas, he said it was an observation of very little importance, and that it was to be looked upon as a matter of mere curiosity, a phenomenon which a man would not see twice in the course of his life. I have, however, shewn it to many of the students half a dozen times during the last two months.

The treatment of this affection, which was abundantly simple, and the same in every instance, was entirely regulated by the circumstances under which the erysipelatous attack occurred. No local treatment was employed, nor was any required. It was not necessary to apply leeches, cold lotions, fomentations, or mercurial ointments. The cutaneous inflammation was not either very extensive or intense; and the constitutions of the patients did not admit of any kind of depletion. The internal treatment was determined on, more from a consideration of the circumstances under which the disease had appeared, than from an accurate analysis of the symptoms, or from any preconceived opinions of the nature of the complaint. In the practice of your profession you will be frequently called upon to treat affections, in which you will have to consider not only the existing symptoms, but also the circumstances under which they have originated; and in many instances you will find that your treatment will be determined more by the latter than the former. Here we had a number of patients labouring under erysipelas, at a period when the system was reduced by fever, and the powers of life at a very low ebb. No one could think of using antiphlogistic or depletory measures under such circumstances. Recollecting that our patients had just emerged from a dangerous disease, we adopted a very different mode of treatment; and in all cases, except where the patient's strength was unbroken, the fever high, and the local symptoms of an intense character, we had recourse at once to tonics, narcotics, and stimulants. We first gave an emollient injection, and then administered sulphate of quinine in the form of enema, to the amount of from five to ten grains, blended with mucilage of starch. This was administered twice a day, and the patient was directed to take small quantities of wine and light nourishment.

Many of the pupils at the time were surprised at this mode of treatment. From the dry state of the tongue, the occasional delirium, the restlessness, and the headache present, they were inclined to think that the patients would be injured rather served, by dietetic and medicinal stimulants of this description. I had, however, witnessed cases of a similar description, and had observed the tongue become clean and moist, the skin soft and cool, the thirst, fever, and restlessness subside, and the local symptoms disappear, under the use of wine. In this instance, also, the value of our mode of treatment was borne out by the result; for, with the exception

of a single case, all our patients recovered. In one instance the disease assumed a malignant form, and carried off the patient in a few hours. She was a young girl of apparently vigorous constitution, and who had got tolerably well through a dangerous maculated fever; towards the middle of the fever she had exhibited symptoms of cerebral excitement, for which we deemed it necessary to blister the scalp. At the time when the erysipelatous attack came on, she had been for several days ill, and was in that low state in which the skin has a great tendency to become ecchymosed, and form bad sores. This tendency I have observed in many instances of low fever, and it is a condition which is always pregnant with danger. The occurrence of ecchymosis, excoriation, and superficial gangrene, in such cases, is not so much the result of pressure, as of the general debility, and the impaired condition of the fluids and solids of the body. It was in this state of the system, and with her scalp still suffering under the inflammation produced by the blister, that this poor girl was attacked with erysipelas of the face. Unfortunately, at the time the erysipelas attacked the sound skin of the head, the blistered surface was attacked with gangrene; and two dangerous local affections became thus suddenly conjoined. Under this unfavourable complication her constitution sank with great rapidity, and she died in twenty-four hours from the commencement of the attack.

I shall now, in pursuance of my intention, proceed to speak of the treatment of fever. I may observe here, that we are now at a point of time possessing no common interest for the reflection of medical observers. It is now nearly two years since my attention was first arrested by the appearance of maculated fever, of which the first examples were observed in some hospital patients from the neighbourhood of Kingstown. This form of fever has lasted ever since, prevailing universally, as if it had banished all other forms of fever, and being almost the only type noticed in our wards. Within the last four days, however, a change appears to have taken place. Scarcely any cases of maculated fever have been admitted within the last fortnight, and the majority of fever patients at present under treatment are free from the cutaneous eruption so frequently observed during the last two years. The cases which we have recently admitted present no spots, or maculæ, and have been termed, perhaps improperly, simple typhoid fever. And here permit me to observe, that it would be very wrong to conclude, from this circumstance, that our recent cases are of a more favourable description than those which preceded them; the disease, it is true, appears to have lost a character which is always looked upon as bad and unfavourable, but it may be just as dangerous a modification of fever as the eruptive typhus. During the predominance of the latter form, all cases without maculæ were in general simple and free from danger; but it is probable that this is not the case at present. There are two cases of this non-maculated typhus in the female ward, which are of an extremely doubtful character, and in which it would be difficult to predict the result. Indeed, were I to make any prognosis, I should say that the chances, if not against them, are at least very fairly balanced.

Now, gentlemen, as it appears we have come to a change, and that we may have to treat a new modification of fever, it behoves us to be extremely vigilant. I invite you to watch and study, with the closest attention, the cases of fever which come before you. Let us, in the first place, endeavour to ascertain whether we have seen the close of one epidemic, and are now at the commencement of another. The number of cases of simple typhoid fever have, you perceive, increased in a very remarkable manner, and the number of cases of eruptive typhus have become remarkably scarce. But there is another and a more important reason why we should study these cases with all due diligence and attention. They may be the first examples of a new epidemic, and every new epidemic, as it has its peculiar characters, so has it its peculiar treatment. We cannot follow the same track which we have pursued for the last two years—we cannot apply our remedies with the confidence of experience—we must now strike into a new path, and for some time our practice must be tentative and experimental. It was only after a good deal of experimental observation that we were able to arrive at a plan of treatment adapted to meet the exigencies of the maculated form of fever: and it is very probable that this new fever may prove at first extremely difficult to manage; and it may be some time before the diminished rate of mortality will show that we have at length discovered its true character, and the remedies best calculated to arrest its progress *.

Let me now direct your attention to some practical points connected with the treatment of the maculated fever which has prevailed for the last two years, and which has spread to a very considerable extent in this city and its environs, attacking alike the upper, middle, and lower

* Since this lecture was delivered, many cases of typhus without maculæ have been admitted, but the maculated form of fever still continues very common.

classes of society. It is not my intention to enter into a detailed history of the origin and progress of this fever, its varieties, symptoms, and pathological phenomena; my purpose is to furnish you with a brief but comprehensive outline of its treatment, and of the remedies which have been found most successful in its removal, as well as the most appropriate time and mode of their application. But as many of the students are unacquainted with this form of fever, I shall premise by observing that it is the same fever which has been frequently observed in this country, and of which a full account has been given in the Report published by Dr. Cheyne and Dr. Barker. You will also find a sketch of its principal characters in one of my lectures, published in the 172nd No. of the London Medical and Surgical Journal for May 1835. It is generally insidious in its first attack, and the symptoms are by no means proportioned to the subsequent danger. From the third or fourth to the seventh day, generally about the latter period, an eruption of dark red spots appears on the skin in various parts of the body. Towards the latter stage, this fever is characterized by great nervous derangement, either with or without symptoms of cerebral congestion. It rarely lasts less than fourteen or seventeen days, and very seldom terminates by a well-defined crisis. It has spread extensively through this country, and has been observed at Liverpool, Glasgow, Birmingham, Manchester, Edinburgh, and London. In this country it has been for many years the prevailing type, and, although its spread as an epidemic may have been checked, and its course interrupted, by the occurrence of other diseases, it is always found in this country, and prevails in a distinct form. It may originate spontaneously, or from contagion. From what I have seen of it, I have no doubt of its double origin. I am also inclined to think that it never attacks the same individual more than once, and that when a man has had the true maculated fever, he never gets it again. In this point, as well as in the eruption, it bears a close analogy to the exanthemata. It is so much more common in Ireland than in any other country of Europe, that my friend, Dr. Lombard, of Geneva, calls it the Irish typhus. Whether it be from the moisture of our climate, or from the poverty and wretchedness of the people, I know not; but it is a fact that typhus is more prevalent in this country than in any other European nation. This may be easily seen by comparing the proportion of fever patients treated in the hospitals of the various capital cities, with the number treated in the same way in Dublin. Dr. Lombard also states, that the British towns which have most intercourse with this country, have more of this fever than those which are more remote, or have less intercourse with us. Thus there is more maculated fever seen in Liverpool and Glasgow, than in Edinburgh, Birmingham, or London. He looks upon it as a fever peculiarly Irish, originating in this country as an endemic, from causes the nature of which are not well understood; and that when it appears in English or Scotch towns, it is the result of contagion imported from Ireland. You will find some very interesting observations on this subject in his papers, published in the 28th number of the Dublin Medical Journal.

In the fever of which I speak, there is nothing which would lead to the conclusion that the disease arose from inflammation. Many persons have regarded fever as produced by inflammatory affections of some organ or system of the body, and have asserted that it is in every instance preceded and accompanied by some form of local inflammation. One class of pathologists have placed the seat of this inflammation in the brain, another and a more numerous class in the digestive system; and all have believed that inflammatory action, whether limited to one or more organs, is the cause of fever. No opinion can be more unfounded, so far as typhus is concerned. Local congestion and inflammations may and do frequently arise in fever, but they are merely superadded to it, and form no part of its essence. I have now witnessed many cases in which fever ran through its course to a fatal termination without any distinct evidence of local inflammation or even congestion; and I have dissected numerous cases of fever in which there was not any appreciable trace of inflammatory action in the organs of the three great cavities.

Having made these general observations, I may observe, in addition, that in the whole range of human maladies there is no disease of such surpassing interest and importance as fever; and I cannot dwell too much on the necessity of your applying most attentively to the study of its pathology and treatment. If you compare the mortality from fever with that resulting from any other disease in this country, you will be struck with the overwhelming fatality of this affection, and will readily admit the inestimable value of a thorough knowledge of its nature and treatment. Recollect, too, that fever is a disease which numbers among its victims persons chiefly in the prime of life, and during the most active and useful stage of existence,—fathers and mothers, persons who are the ornament or the stay and

support of their families, the intellectual, the industrious, the efficient,—those whose lives are most valuable to their friends and to society. This gives an additional interest to the study of fever, and should stimulate you to endeavour to arrive at a correct knowledge of its nature and treatment. And here let me observe, that there is nothing more untrue than the assertion, that the treatment of fever is a matter of indifference. It has been the custom to look upon every plan of treating fever as idle and absurd, and until very lately there were many persons in this country who believed that patients recovered, not from having had the advantage of treatment, but from goodness of constitution or some favourable accident; and it was usual with such persons to appeal to the experience of Dr. Rutty, who, in recording the history of the epidemies of his own time, observes, that the mortality was greatest among those who were best attended to, and that those who were left to God's providence, and got nothing but cold water, recovered. And, indeed, I must admit that the treatment of some of the cases of fever which I witnessed when a student, would seem to justify the quaint and sarcastic observation of Dr. Rutty. At that period, whether it was from bad treatment, or from what has been termed the *nimia diligentia medici*, it is a fact that the maximum of mortality was among the rich, and that those who were most attended to died most speedily. In the epidemics of 1816, 1817, 1818, and 1819, it was found by accurate computation, that the rate of mortality was much higher among the rich than among the poor. This was a startling fact, and a thousand different explanations of it were given at the time; but I am inclined to think that the true explanation was, that the poor did not get so much medicine, and that in them the *vis medicatrix* had more fair play. I could appeal to the practice of those times in proof of this opinion, and as we go along I shall have an opportunity of alluding to this part of the subject again, and contrasting the practice of the present day with that which was generally followed thirty years ago. If you look to Dr. Cheyne and Dr. Barker's Synopsis of the plan of treatment employed by the physicians of those days, you will be prepared, from a mere inspection of it, to admit, that it was at least as hard to escape the physician as the disease. Since that period our practice has greatly improved, and things are much changed; the preponderance of fatal cases is now to be found among the poor, and the mortality among the rich, or those who have proper medical advice from the commencement, is not one-third of that which is found among the indigent, who are generally neglected at the commencement of the disease. I am therefore fully prepared to deny that, in the present state of medical knowledge, our practice is a matter of indifference; on the contrary, there is no disease in which diligent attention and skilful treatment are more frequently successful than in fever, nor is there any affection of equal importance in which our therapeutic means are more efficient and valuable.

Now, when called on to treat a case of fever, there are several things which require your attention. In the first place, you should examine the state of the family arrangements. This is a matter which men are apt to overlook or treat as a matter of indifference, but in my mind it is of no ordinary importance, and should always be attended to. You should never, if possible, undertake the treatment of a case of fever where the friends or relations of the patient supply the place of a regular fever nurse. The mistaken tenderness of relatives, and their want of due firmness, presence of mind, and experience, will frequently counteract your exertions and mar your best efforts. Affection and sorrow cloud the judgment, and hence it is that very few medical men ever undertake the treatment of dangerous illness in the members of their own families. The sympathy which a nurse should have for her patient should be grounded on a general anxiety to serve, and a strict sense of duty, as well as a laudable desire of increasing her own reputation; it is, in fact, a sympathy analogous to that which a physician should have. Again, it will not do to have a nurse who has been usually employed in other diseases; your assistant must be a regular fever nurse,-and the man who undertakes the treatment of a long and dangerous case of fever without such an assistant, will often have cause to regret. I could mention to you many cases illustrative of the truth of this assertion. I could tell you, that where I have permitted the continuance of the services of one of the family, or of a common nurse, I have been almost invariably annoyed and disappointed. I now make it a general rule to refuse attending any dangerous and protracted case of fever without a properly qualified nurse.

In the next place, when treating a case of bad typhus, do not think that it will be sufficient to see your patient once a day. But you will say, perhaps, that our hospital patients here do very well, and yet they are visited only once in the twenty-four hours. True,—but then we have experienced nurses to look after them at all hours; we have the valuable sur-

veillance of our apothecary, Mr. Parr; we have the attendance of the resident pupils, and of the gentlemen who take charge of the cases. You see, then, that they do not depend on a solitary visit. How often has Mr. Parr, the resident pupil, found it necessary to change the treatment adopted at the morning visit? How often have the remedies of which we had only given a hint in the morning, been actually and energetically employed before the close of the day; and how often have lives been saved by the valuable attentions to which I have just alluded? No one should attend a case of fever without having proper medical assistants. My practice, in general, is to visit my fever patients two or three times a day, and when I have a bad or a dangerous case to manage, I always have a competent medical assistant to stay by the patient and watch every change of his malady. I do not know how they manage this matter elsewhere, but in this city we have so many zealous intelligent students, so many young medical friends, and so many well-educated apothecaries, that we are never at a loss for an assistant. This fact is, I think, a sufficient answer to the objections put forward by Dr. Johnson, in the last number of the Medico-Chirurgical Review. He says that tartar emetic is a two-edged sword, an agent powerful alike for good or evil, and in the administration of which no ordinary circumspection is demanded. All this I am willing to admit; there is no remedy capable of producing more mischief when abused, but when properly watched, it is, I am confident, the means of saving many valuable lives. He says also, that Dr. Graves cannot give that share of attention to his patients which the employment of such a remedy demands. He is quite mistaken on this point. I am never at a loss for some skilful person to remain with the patient, watch the operation of each dose, and modify or change it according to circumstances. The want of proper assistants may be an objection to the administration of tartar emetic, but this objection does not hold good with respect to Dublin.

One or two more observations of a general nature. Some persons have such a terror of foul air in cases of fever, that you will find all the windows in the house thrown open, not even excepting those of the patient's bed-chamber, and wherever you turn, you are sure to meet with a current of air. Now this is an unnecessary practice, likely to entail disease on the family, and local inflammation on the patient. The bed-room of a patient labouring under fever should be well aired, but without what is termed thorough air, and it should, if possible, be a quiet back room, away from the street. In the next place, it should be sufficiently large to hold two bedsteads conveniently; and you should order the attendants to have two well-aired beds in readiness, from one of which the patient should be changed to the other every twelve or twenty-four hours. You can scarcely have an idea of the comfort this affords to a person in fever. The room can be kept properly ventilated by a fire, and the temperature can be regulated by a thermometer. Some persons are in the habit of constantly sprinkling the room with vinegar, others with the chlorides. I do not know that it is necessary, and I think the use of chlorine is doubtful, if not improper, and may prove injurious to the patient.

Having made these few general observations on the steps to be taken by those who enter on the treatment of typhus, I shall now proceed to speak of diet and medicines. In a disease like fever, which lasts frequently for fourteen, twenty-one, or more days, the consideration of diet and nutriment is a matter of importance, and I am persuaded that this is a point on which much error has prevailed. I am convinced that the starving system has in many instances been carried to a dangerous excess, and that many persons have fallen victims to prolonged abstinence in fever. This was one of the errors which sprung from the doctrines of those who maintained that fever depended on general or topical inflammation. They supposed that fever arose from inflammation, and immediately concluded that to treat it successfully, it was necessary to reduce the system by depletion and low diet, and to keep it at this point during the whole course of the disease. Hence the strict regimen, the *diète absolue*, of the disciples of the physiologieal school, and of those who looked on inflammation as the essence of fever. The more the symptoms appeared indicative of inflammatory action, the more rigorous was the abstinence enforced. If a patient's face was flushed, or his eyes suffused, no matter what the stage of the fever was, they said, "here is inflammation of the brain, and nourishment will exasperate it." If he had red or dry tongue, and abdominal tenderness, they immediately inferred the existence of gastro-enteritis, and all kinds of food, even the lightest, were strictly forbidden. That this proceeds from false notions on the nature of fever is beyond doubt, and I pointed out this fact many years ago, long before the appearance of Piorry's work. Let us in the first place examine the results of protracted abstinence in the healthy state of the system. Take a healthy person and deprive him of food,

and what is the consequence? First, hunger, which, after some time, goes away, and then returns again. After two or three days, the sensation assumes a morbid character, and instead of being a simple feeling of want and a desire for food, it becomes a disordered craving, attended with dragging pain in the stomach, burning thirst, and some time afterwards, epigastric tenderness, fever, and delirium. Here we have the supervention of gastric disease and inflammation of the brain as the results of protracted starvation. Now these are in themselves very singular facts, and well deserving of being held in memory. Read the accounts of those who perished from starvation after the wreck of the Medusa and the Alceste, and you will be struck with the horrible consequences of protracted hunger. You will find that most of the unhappy sufferers were raging maniacs, and exhibited symptoms of violent cerebral irritation. Now, in a patient labouring under the effects of fever and protracted abstinence, whose sensibilities are blunted, and whose functions are deranged, it is not at all improbable that such a person, perhaps also suffering from delirium or stupor, will not call for food, though requiring it, and that if you do not press it on him, and give it as medicine, symptoms like those which arise from starvation in the healthy subject may supervene, and you may have gastro-enteric inflammation, or cerebral disease, as the consequence of protracted abstinence. You may, perhaps, think that it is unnecessary to give food, as the patient appears to have no appetite, and does not care for it. You might as well think of allowing the urine to accumulate in the bladder, because the patient feels no desire to pass it. You are called on to interfere where the sensibility is impaired, and the natural appetites dormant; and you are not to permit your patient to encounter the horrible consequences of inanition, because he does not ask for nutriment. I never do so. After the third or fourth day of fever, I always prescribe mild nourishment, and this is steadily and perseveringly continued through the whole course of the disease.

ON

THE ORGANIC GLOBULE;

A PHYSIOLOGICAL MEMOIR.

By Thos. Gordon Hake, M.D.
Physician to the Brighton Dispensary, &c.

To direct with enlarged views the philosophic mind through what is useful and instructive in the *living science* of physiology, and to pass silently over opinions which enfeeble the cause of reason, and make nature appear level with the understandings of the uninformed, are the objects which the writer proposes to himself to accomplish. There is truth enough to swell the pride of volumes in the functions and disordered manifestations of the living body; and of these so many remain unanalysed, that the task which is undertaken, of pointing out the way to a more intelligible system of physiology, if in any measure successful, cannot be unattended with good. Facts are numerous, but a legitimate application of their value is rare in physiological inquiries.

It is the character, therefore, of hypotheses, but not hypothesis itself, which merits disrespect. For physiology is the most metaphysical science throughout the range of things; more so than intellectual philosophy, since the mental faculties are manifestly allied to highly organized matter; but in the depths of physiology subsists an invisible world: causes are hidden altogether; effects consequently emerge as objects of wonder rather than research. Those who, with a kind of intellectual creativeness, display a talent of bearing analogies into the arcana of life, which casts a glimmering ray of light on the responsibilities impressed on organization, are not to be blamed as hypothetical. From a suggestion may spring a theory sufficiently important to elicit contradiction; this swells the catalogue of facts; and, finally, a master-spirit may appear, to arrange collected materials anew, and to re-arrange until the picture is so like to nature as to be acknowledged and received.

Because the highest order of intelligence is seldom expended on physiology, it does not rank as the first of the sciences. Another*, owing its dignity to the extent of its machinery, the grandeur of its parts, and not to the superior greatness of its laws, has assumed the pre-eminence, and attracted the largest share of talent, although its laws pertain to the substances of which life is formed, even before the building of its fabric has commenced. It is on the ground, then, that the laws of physiology begin where those of the physical sciences terminate, that the lovers of this branch of philosophy take their stand. Those who

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* Astronomy.

meet with no impediment in other pursuits enter on this to find the measure of their understanding, and to acknowledge, that there is none other so expressive of nature's great successes.

The difference between an organic and inorganic body, independently of their functions or use, may be found in the nature of their composition, and expressed by what best defines, in contrast, the regular contexture of the one, and the conformation of the other, as respects the disposal of the primitive elements which gives to each its state. The constituents of either may be alike; it is not, therefore, in component parts that the difference is to be discovered; for four elements, named oxygen, hydrogen, nitrogen, and carbon, may constitute animal or brute matter, their proportions being exactly the same. Nor is it to any superadded principle, as the vital, that the difference can be traced; for organic matter retains its form after that principle is destroyed. Two equal portions, for example, of a membrane being separated from a living body, and the one being preserved, while the other is submitted to total decomposition,—fruitless as it would be to mingle the elements again, with a view to restore the organic state, no other known process than the one by which they were organized being competent to recover to them that past form, they still contain within themselves the capacity of being organized, for the very same elements, in the membrane which was not submitted to analysis, remain organic after their life has ceased.

Organized substances, therefore, may be considered as differing from unorganized in their contexture, of which the primordial cause has remained unknown to the most acute observation and steady perception that reasoners can command; and although individual minds, by urging their invincible desire after truth through the effects, may have an occasional and indistinct vision of a formative cause, no impression of that phenomenon has ever been sufficiently vivid to be retained, or to enable the philosopher to describe to others, or to satisfy mankind of his superior knowledge.

Organic matter is resolvable into parts of the same, although less perfect; and these again may be reduced to sub-organic masses; so that, as human skill can succeed thus far, it is probable that the most perfect state of organization is built up of even hundreds of other states less perfect, and in a mutual state of dependence.

Between these organic elements of the solids, and the organic globule which appears to form the basis of the living body, no intermediate state of matter has yet been found, unless the rudiments of those discovered in the circulating system be brought forward as shadowing forth the more perfect shapes, and affording an easier transport for the mind along the early gradations of animal formation. In this view the fluid elements of organization may take precedence of the solid, the liquid globules of the fixed, although we have no evidence of a less composite state in these former; so that they must be considered as indebted to their greater relative simplicity rather than to that of their constitution, for the intermediate grade they are here allowed to fill.

It is most impressive to contemplate with due profundity the progress made in the elementary laws of matter by means of combination. A simple body alone has no apparent law; placed beside a second they both manifest a quality; and the same process being continued through a series, a body is formed, the organic globule, which not only resembles, but in its highest type forms a part of that which is conscious of its existence.

Although the link between two kingdoms of nature appears broken by the sudden transition from inanimate to organic, the qualities of the first are only concentrated in the second, and rendered capable of intensest action.

The first step, then, made by inanimate bodies towards complete organization is the globule. This body, however, which is no greater than one seventy-five thousandth part of an inch in diameter, is equally inanimate with the elements of which it is shaped. The formative progress which oxygen, hydrogen, &c. have made on attaining the organic globular state, and passing the intermediate grades of composition, is very great; even this cannot be traced: still the globule, when formed, is as inanimate alone as an elementary gas, or any other simple form, and equally inert. If it is allowable to judge of the composition of the globules by that of the tissues which they constitute, the cellular tissue globule is the most simple. It ultimately consists of oxygen

hydrogen, carbon, and azote; proximately of gelatine, and perhaps fibrine and albumen; but each of these substances is composed of the same elements, of which the proportions only differ. Of either, about one-half is carbon, while four-fifths of the remainder consist of oxygen and azote in nearly equal parts, hydrogen constituting the rest. This is the analysis of Thenard:—

	Carbon.	Oxygen.	Hydrogen.	Azote.
Fibrine	53·365	19·865	7·021	19·934
Albumen	52·883	23·872	7·540	15·705
Jelly.....	48·881	27·207	7·914	16·998

It has been asserted that the globules described above may be resolved, by further microscopic aids, into other globules of much inferior dimensions.

The second globule which may be considered is the muscular tissue globule, a body separated in its nature and composition from the first. Of this molecule it is difficult to trace the constituency, or define its limits, surrounded as it is by so many heterogeneous tissues. Fibrine may be considered its principal component; albumen may perhaps be added; gelatine, extractive matter, osmazome, phosphates of soda, ammonia, and lime, sulphur and potass, muriate, phosphate, and lactate of soda.

As not the globules themselves, but the fibres which they form, have yielded the above analysis, it is a matter of great difficulty to decide which of the substances, or if all, enter into the composition of the organic molecule called muscular, and which into the connecting media. The probable truth is, that such of the above elements as belong to cellular tissue, a connecting medium of muscular fibre, pertain to it alone; while some of the salts, not being discoverable in the blood which circulates in muscle, belong exclusively to its substance; unless the analysis itself, having been carried too far, may have led to a deceptive recomposition.

According to observations much to be relied on, the muscular-tissue globule is of the same magnitude as the cellular, and—that which next follows in the order of consideration—the nervous-tissue globule.

Like the other two, the nervous-tissue globule has been found to consist of parts resolvable into parts more simple, and these have been separated until analysis, ranging the grades of highly combined matter, has reached the simple elements, and expanded all its force.

Vauquelin has supplied the following analysis of nervous tissue.

Water	80·
White fatty-matter	4·53
Red fatty-matter	·70
Albumen	7·00
Osmazome	1·12
Phosphorus	1·50
Acids, salts, and sulphur.....	5·15

Nervous globules, which these elements give rise to, have been variously described. Although the correct Edwards has compared their size to that of muscular and cellular corpuscules, and convinced himself of their coincidence, and of the unique diameter of every species of nervous globule, it has been asserted on the other hand, that this body in its least degree of development is as much as the four thousandth part of an inch in diameter, and in its greatest the two thousand four hundredth, the median size being the three thousand four hundredth part*.

The nervous-tissue globule thus dividing itself into classes, observation believes that it has ascertained to which the greater corpuscules, and to which the lesser, belong, and has named, from pre-existing reasons, the former medullary, and the latter cineritious.

So much uncertainty existing in regard both to the exact composition and magnitude of the organic globular corpuscule, science would be altogether at a loss for further information on subjects whereon precision is so hopeless, but for one fortunate truth, that principles are chiefly to be desired, and that they are deducible with as much ease from the more coarse, as from the most

* Bauer.

precise experiments. What knowledge of analysis could teach us more than this;—organization is composed of the same elements as the rest of the universe; its high gradations, which present complexities most curious, and compounds so intricately formed that the accompaniment of some extraordinary effect is demanded, are attended with functional powers both wonderful and new; that the elements, when urged by some irresistible agency into extensive and unprecedented union, unable from the vastness of the force used to blend into ordinary forms such as milder causes might induce, and still less incapable of separating each other, obey the omnipotent force, rise above the most complicated forms of ordinary matter, and are established as organic in the beautiful and surprising form of globular corpuscules, the basis of living tissue.

The nervous tissue globule contains its nervous matter in cells of excessive minuteness.

There is an intermediate substance, of a fatty aspect, among the nervous corpuscules. Should this be considered the fatty matter which the analysis of nervous substance yields?

As we ascend in tracing the organization of causes, those which attach to themselves effective powers equivalent to their high natural sources, it may appear surprising that so perfect a regularity should pervade systems, when slight and apparently inevitable deviations from their established harmony would proceed to more alarming derangement, and finally interfere with the continuance of order. This is prevented by the immutability of the inorganic pervading the organic laws. The latter enjoy a derived, the former an original fixity. So perfectly unerring are the laws of elementary matter, that philosophers have even ventured to name them *eternal*. This immutability pervades every state of combination, and is as manifest in each result as in the simple bodies whence higher effects are obtained. Still, though the laws of matter remain immutable, their manifestations vary with their union, and when this is carried to the highest point, the organic, these laws are so strengthened by each other as to appear to superficial observers suspended; whereas they are only so actively poised among themselves, that their united forces can resist agents which, from a less perfected union, would call into visible existence the simple qualities of the parts pertaining to this now self-defending organization.

Thus the qualities of the organic corpuscule are the united powers of its component elements, arranged under the influence of some agent more potent than any known, or of a series of agents, and amid a vast series also of modifying circumstances; and the meaning of these creative causes can only be ascertained by an incessant and subtle observation of structure, and reflection on the phenomena which are attendant on organization.

ON THE FUNCTIONS OF MECKEL'S GANGLION AND THE GLOSSO-PHARYNGEAL NERVE.

To the Editor of the Medical Gazette.

Sir,

The numerous discussions that have been held this some time past respecting the functions of Meckel's ganglion, and the glosso-pharyngeal nerves, and the experiments lately performed by Dr. Alcock, of Dublin*, have induced me to bring forward the opinion which I hold on these subjects; in doing so, I will confine myself as much as possible to the support of my own opinion, without attempting to controvert those of others, as nothing, in my estimation, tends more to impede the progress of scientific research, than too free disquisitions on the opinions of others.

The situation of Meckel's ganglion, its connexion with the fifth pair of nerves, which possess so marked an influence over the organ of vision, the distribution of its branches to the nose and palate, the remarkable course of its chorda-tympani filament, which passing backwards through the vidian canal, enters the hiatus fallopii, communicates with the glosso-pharyngeal nerve, traverses the cavity of the tympanum, and finally, emerging from it through the glaserian fissure, joins, and is lost with the gustatory nerve, are circumstances which have at all times given rise to much discussion respecting the uses of these nerves, especially when it is recollected that the parts to which they

* Med. Gaz. p. 295, present volume.

are distributed are abundantly supplied with nervous influence from other sources, both for the purposes of common and special sensations. What can be their use? It is, in my opinion, to connect the senses of smell, sight, hearing, and taste together,—to be, as it were, the sympathetic nerve of these senses.

That a remarkable sympathy exists between these senses, every day, nay every hour, affords us numerous examples. The sight of the rose, or other fragrant substance, immediately excites in us the desire of smell; we almost involuntarily apply it to the nose. The habitual snuff-taker, on beholding a snuff-box, perceives a remarkable titillation in the nares, which can only be appeased by partaking of his accustomed stimulus. The sight of his favourite dish, and still more so the smell, arouses in the gourmand an urgent desire to gratify his taste with the object of his wishes; he smacks his lips, and already enjoys the banquet in anticipation, whilst the salivary glands pour forth their secretions in increased quantities. The apple suspended from the tree awakens in the youth the recollection of former enjoyments, and he longs to gratify his taste with the distant treasure. A piece of cinnamon taken into the mouth and chewed, whilst the nose is kept tightly closed, tastes like a piece of deal; an onion, under the same circumstances, like an apple. All those facts prove a remarkable sympathy between the senses of sight, smell, and taste: how many more might be adduced! But how do we show the sympathy between these and the sense of hearing? Very simply. The voice of a well-known friend recalls to our recollection his figure, and we desire immediately to behold him. The sound produced by the pouring of his favourite beverage from one vessel to another—nay, even the uncorking of a bottle—excites in the drunkard an ardent thirst, which can be only appeased by indulging in his usual propensity. The grating noise caused by cutting a piece of cork, paring a piece of slate-pencil, &c. awaken in some most unpleasant sensations, and "set the teeth on edge." How can we account for these varied sympathies but from the distribution of the branches of Meckel's ganglion?—what other use assign to them?

Some may, perhaps, attempt to explain them through the agency of the general sympathetic system; but why resort to a general when we can prove a direct cause of sympathy? Others may assert, that in some of the lower tribes of animals these sympathies are present to a certain extent, in which Meckel's ganglion does not exist; to these I would reply, that man is the most highly organized of the animal creation, and that in no particular is the perfection of his organization more apparent than in the great, the universal sympathy, which exists between all parts of his structure, and that, what in other animals may be effected through the agency of the general system, requires in him additional structures; and this observation applies to many parts of the human body, which, in this age of comparative anatomy, have been considered in him nearly or altogether useless; because, forsooth, they are absent in, or may be removed from, the brute creation with impunity. These wholesale deductions from the inferior tribes of animals, and their application to the human system, appear to me to possess much absurdity.

Not less complicated is the distribution of the branches of the glosso-pharyngeal nerve. This nerve, immediately after its exit from the cranium, sends off a band to communicate with the chorda-tympani nerve; after this several branches proceed from it to join the seventh, pneumo-gastric, and sympathetic nerves, and pharyngeal plexus; it then distributes filaments to the stylo-pharyngeus muscle, the constrictors of the pharynx, the lingual muscle, and the constrictor isthmi faucium; numerous branches are also derived from it which supply the mucous membrane lining the pharynx and fauces, the tonsil, and neighbouring mucous glands, the mucous membrane covering the root of the tongue and epiglottis, and the glosso-epiglottic folds. What an extraordinary distribution is here! Filaments distributed to muscles, mucous membrane, and glands, and holding an intimate connexion with the neighbouring nerves; and yet a nerve which is simple in its functions, if we may argue from the simplicity of its origin. What is, then, the function performed by the glosso-pharyngeal nerve? I consider that it connects in sympathy the several parts concerned in the act of deglutition,—that it, in fact, produces that sympathetic action of the muscles of the

tongue, larynx, fauces, and pharynx, on which the integrity of that act depends; at the same time endowing the surrounding mucous membrane and glands with a degree of sympathy which contributes to this action. There can be no doubt that this sympathetic action exists; the rapidity with which the act of deglutition is performed, requiring a consent of action and feeling between so many parts, is abundant proof of it; but many more can be brought forward. A foreign body—a feather, a portion of mucus irritating the mucous membrane lining the fauces—produces immediately a convulsive action of the pharyngeal muscles. A portion of food, or any other substance, impacted in the pharynx, causes immediate death by suffocation; and this is produced, not by compression of the larynx, inasmuch as the cricoid cartilage, which forms a complete ring, prevents this taking place, nor by the direct irritation of the muscles of the larynx, the crico-arytenoidei postici (dilators of the rima glottidis) being most immediately affected, but by the spasmodic action of the constrictors of the larynx, which are called into action whilst deglutition is being performed,—an action which continues as long as the foreign body is allowed to remain. But I have said the glosso-pharyngeal nerve communicates with the chorda-tympani nerve. Can we from this explain that convulsive action produced in hydrophobic patients by the sound of water pouring from one vessel to another, or by the sight of this or other fluids? I think so. This theory respecting the use of the glosso-pharyngeal nerve is supported by the experiments performed by Dr. Alcock. He states as follows:—"I have divided both glosso-pharyngeals in several dogs, with the following results: in two of them, each time that either nerve was taken upon a hook, preparatory to its division, a most violent action of the pharyngeal muscles was excited, resembling precisely the pharyngeal effort to reject the matter, which most persons must have experienced, when something nauseous or revolting has got beyond the power of the tongue, and entered the pharynx; and it was so imperative, that the animal struggled to get upon its feet, and was with difficulty restrained. In a third, a similar effect, only less marked in degree, was produced by pulling upon the nerve with a ligature passed underneath it; and in one of the three the root of the tongue was at the same time depressed, and rendered concave side to side." "In *every instance* deglutition was more or less impaired." "But in those instances in which the nerves were perfectly divided, deglutition was so very much interfered with, as in some cases to be impossible. The animal took and masticated the morsel as usual, and swallowed it from the mouth into the pharynx freely; but then, after repeated and unavailing efforts to get it further, it made equal efforts to get it back again, in which it often experienced so much difficulty, as to become much exhausted, or to seem even in danger of *suffocation*, before it succeeded."

If the foregoing opinions be correct, we possess a satisfactory explanation of the uses of the several nerves distributed to the organs of the senses. To some the nerves of the tongue may appear to form an exception to this remark, as it is difficult to decide what is the office of the gustatory nerve: does it endow the tongue with common or special sensation, or both? I consider that it presides over both common and special sensation. That most of the branches of the fifth nerve endow with common sensation the parts which they supply, is generally admitted; that its gustatory branch performs this office cannot be questioned, from the fact that its branches are freely distributed to the surrounding mucous membrane, the gums, &c., which possess common sensation only. That it also presides over the special sense of taste is, I consider, equally evident, from the numerous experiments performed on this subject, the greater part of which tend to establish this position, and from the circumstance that taste is most perfect in that part of the tongue, viz. the anterior portion, in which the nerve is lost. Against this supposition I am aware that it may be stated, that division of the gustatory nerves will not wholly destroy the sense of taste; but such an experiment cannot be conclusive, as, even after the nerve has been divided, a certain portion of the sense may be conveyed through the numerous anastomoses of its branches, unless the trunk of the fifth nerve be divided; and even in this instance the experimenter must take into consideration, in operating on animals, which

can only be the subject of experiment, how much of the apparent remnant of taste may depend on the integrity of the other senses, and particularly on that of smell. I have no doubt that experimenters have often been mistaken from this cause.

Another objection has been brought forward against this theory—as by Mr. Noble and others, namely, that taste has frequently been lost in an individual, whilst the common sensation has not been impaired, and *vice versâ ;* but how often do we meet with a similar occurrence in other parts of the body, confessedly supplied by one nerve, with two different powers, viz. that of sensation and motion. It frequently happens that one of these is destroyed, whilst the other remains perfect; so may it be in the tongue: either special or common sensation may be destroyed separately, whether resulting from disease at the origin of the nerve, or a disordered state of its ultimate ramifications, which may no doubt be locally affected, is not necessary at present to be determined; nay, the mucous membrane itself may be in so inflamed or otherwise morbid state, as to increase, diminish, or totally destroy, either or both sensations. Thickening of it, an increased deposit of mucus upon its surface, or effusion into the submucous cellular tissue, may produce all those results, without the nerves participating in the disease.

In the preceding observations I have taken but little notice of the opinions of others: allow me to state to those who have lately written on this subject, that it is not from want of respect for them, but solely from the opinion entertained by me, as at first stated, that the cause of scientific research is frequently impeded in its course by too free disquisitions on the opinions of others; and assuredly, if we wish to illumine our path, it is an injudicious plan to commence by extinguishing our neighbour's light.

In conclusion, I hope ere long to offer some further remarks on this subject, supported by experiment and observations on disease. Should Dr. Alcock, or any other individual, in the meantime continue their investigations, I shall be most happy to receive any arguments that may be brought forward, either for or against my opinions. From a partial knowledge of Dr. Alcock, I feel convinced that all his observations will be conducted with a single eye to the elucidation of truth, and the consequent benefit of the profession.

I remain, sir,
Your obedient servant,
MALCOLM W. HILLES,
Lecturer on Anatomy and Physiology at the Westminster School of Medicine.

January 5, 1837.

OBSERVATIONS ON MR. EVERITT'S REMARKS ON THE NEW PHARMACOPŒIA.

To the Editor of the Medical Gazette.

SIR,

PERMIT me to make a few observations on Mr. Everitt's criticism on the London Pharmacopœia, which appeared in the last number of your journal.

Intending to prove the folly of directing medicines to be prepared on a small scale, because they can be obtained more cheaply on a large one, Mr. Everitt says—"Thus, A is a maker of carbonate of soda from salt; he gets hydrochloric acid at the same time. B is a maker of sulphate of magnesia from bittern; he also gets hydrochloric acid at the same time; and this acid, procured from distilling sulphuric acid with muriate of magnesia, is just as good as that obtained from salt by sulphuric acid, provided care be taken to have it pure." Now it is readily admitted, that provided two portions of hydrochloric acid are equally strong and pure, that they are equally good, but it does not follow that the modes of procuring them are equally eligible; and until bittern can be obtained free from common salt, the sulphate of magnesia procured from it by sulphuric acid must be mixed with sulphate of soda. This case has, I grant, but little to do with the processes of the Pharmacopœia, but it proves that Mr. Everitt is not happy in the selection of his illustrations.

Mr. Everitt afterwards says, "we will now give a few instances illustrative of the *great care with which the work has been executed;* the italics are Mr. Everitt's, and were not required to show that he meant the great *want* of

care; he then mentions, "*Ammoniæ liquor* defined 0·960," and proceeds to state that only two fluid ounces of water should be added to one fluid drachm,* (meaning fluid ounce) of the liquor ammoniæ fortior to reduce its sp. gr. to 0·960.

When Mr. Everitt's correction is corrected, I admit that he is right; and it was originally stated that these proportions should be employed; the error, I believe a misprint of *tribus* for *duabus*; it is one which I presume Mr. Everitt will pardon, for an error somewhat more difficult of commission, he states that "much of the commercial *liq. amoniæ.* contains chloride of *colchicum*, meaning *calcium*†.

With respect to the present method of preparing liquor ammoniæ, Mr. Everitt says it was, "perhaps, the worst of those in the old edition;" and he adds that "the alterations are merely to suit the new measures;"—that is, the alterations are no alterations at all. This, however, is a very incorrect representation of the circumstances of the cases. In the late Pharmacopœia, eight ounces of hydrochlorate ammonia, six ounces of lime, and sixty-four fluid ounces of water, were directed to be used to procure twelve fluid ounces of liquor ammoniæ. To make a liberal allowance, let it be supposed that one-fourth of the water remained diffused through the lime undissolved; we should then have to heat forty-eight fluid ounces of solution to procure twelve fluid ounces of liquor ammoniæ; whereas, by the present process, the same quantity of solution yields eighteen fluid ounces of product. In this operation, therefore, smaller vessels, less fire and time, are employed, than in the former one.

Mr. Everitt then shows (and I admit the accuracy of his statement, without allowing that of the inference deduced from it), that, in the present process, half the ammonia of the muriate is lost, and he proposes a method by which this is to be remedied: although an experienced person might advantageously employ some modification of this plan, especially if metallic vessels were used, yet I prefer the loss of ammonia to the complication of Mr. Everitt's apparatus, and the danger which is incurred in distilling under pressure with glass vessels. And I assert that it was not from want of care that a process similar to that proposed by Mr. Everitt was rejected; though whether it was from want of judgment, is a subject fully open to discussion.

The advantages which Mr. Everitt represents as to be derived from his process, show, to use his own expression, with what facility an operation may be "*bungled.*" Thus, he says, that if liquor ammoniæ, of specific gravity 0·960 = 10 per cent. ammonia, be wanted, it may be obtained by passing the ammonia liberated from 10 parts of hydrochlorate into 30 parts of water, until they have increased to 35 parts; and then he adds, "that nearly all the ammonia will have passed over." Now, if 35 parts of solution of ammonia, containing 10 per cent. of the alkali, can be obtained from 10 parts of the hydrochlorate, not only has the whole of the ammonia passed over and been condensed, but the salt must have yielded more than it contained; for 35 parts of solution must contain 3·5 parts of ammonia, requiring 11·1 parts of hydrochlorate for their production, instead of only 10.—I am, sir,

Your obedient servant,

R. PHILLIPS,

F.R.S. L. & E., &c.; and Lecturer on Chemistry at St. Thomas's Hospital.

Jan. 12. 1837.

* So in the Lancet.
† So in the Lancet.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Observations on the Construction and Use of the Respirator. By JULIUS JEFFREYS. 1836.

THE "respirator," it may be necessary to explain, is an instrument intended to warm the respired air as it passes through it, so as to prevent the injurious consequences to the lungs of breathing too cold an atmosphere. It must be obvious that the low temperature of the air during a great portion of the season in this country is one of the most fertile causes of pulmonary complaints; and that any contrivance by which persons might have the benefit of fresh air and bodily exercise without the risk arising

from cold, is a great desideratum. It appears to us that this purpose is in great measure attainable by means of the instrument described in the pamphlet before us. The principle consists in interposing between the lungs and external atmosphere at the mouth, (or at the mouth and nose jointly), a little apparatus, having metallic gauze so arranged that the air must pass through several folds of it, with minute distances intervening. The heat of the breath is abstracted on expiration, and retained by the apparatus as the air passes out, and is as readily yielded back to that which enters on inspiration; so that before the air reaches the lungs, even on a very cold day, it has already attained an agreeable temperature. The impression which the first description of such an apparatus communicates is, that it must be productive of a sense of closeness and confinement — impeding the respiration, interfering with the voice, and being productive of disagreeable moisture,—in fact, something like breathing through a piece of muslin.

The number of persons who may be seen on a cold day with their handkerchiefs at their mouths, sufficiently shows that some such contrivance as the "respirator" would be very acceptable to them. Now all the advantages they could desire, are professedly afforded by this little instrument. It is an ingenious, clever thing, and so far as we can judge, the principle appears to us excellently suited to its purpose. Two circumstances appear essential to the perfection of the instrument—that it should be sufficient to arrest the heat, and yet not calculated to impede the breathing. Both objects seem to be amply provided for in the "respirator" of Mr. Jeffreys: the wires nearest the mouth are one three hundredth part of an inch thick, and the same distance apart from each other; there are from eight to twenty layers of wire, and those most external are attenuated till they are no more than one six hundredth part of an inch in thickness. The following short extract will perhaps give a better idea of the principle:—

"Since the temperature of any one substance must be lower than that of any other before it can receive heat from the latter by conduction, it is plain that a single layer of metal could only take a part of the heat from the breath; even if the contact were of longer duration than it is, the breath would lose no heat after it had raised the metal up to its own temperature. In order to extract more heat from the breath, it must be carried through another layer of metal, which, being much colder than itself, can abstract heat from it. As the breath and this second layer approach towards the same temperature, this second layer will not be able to abstract more heat from the breath. It must, therefore, pass through a third still cooler layer, and, for the same reason, through several. In practice, six or eight will not prove too many; and in the coldest weather double that number may be employed. In this series of laminæ, each is warmer than the one in front of it, from the exterior one, which is nearly of the temperature of the atmosphere, to the innermost one, which is perhaps within ten or fifteen degrees of the temperature of the breath. These laminæ would not remain one instant of time at so different states as to heat, if they were placed in contact with each other. In order to preserve the progressive difference in their stocks of heat, they must be kept apart; and it will be found, that during the short period of one respiration, a very small separation will suffice for the purpose. An interval for each of one-fortieth of an inch, including the metal, is more than enough; six or eight layers may therefore lie in one-eighth of an inch. These layers having been warmed during an act of expiration, and being each warmer and warmer as they lie nearer the mouth, are enabled to give heat in the most advantageous manner to the fresh air entering from without, which takes up a parcel of heat in traversing each; since, although it grows more and more warm, it is sure to find every layer it comes to warmer than itself, which is, of course, a relative condition necessary for the communication of heat to the air."

The instrument costs two guineas (we believe), and we recommend it to the attention of those who have delicate lungs. It may be fastened without difficulty by means of a ribband round the head, and would not be more remarkable than spectacles must have appeared when first introduced.

A Practical Treatise on the Diseases of the Skin, arranged with a view to their Constitutional Causes and Local Characters, including the substance of the Essay to which the Royal College of Surgeons awarded the Jacksonian Prize, and all such valuable Facts as have been recorded by Continental Authors on these subjects, to the present time. By Samuel Plumbe, &c. &c. Fourth Edition, revised, corrected, considerably enlarged, and with additional engravings. Sherwood. 1837.

A medical work must have some merit to come to a fourth edition, and this proof Mr. Plumbe's Treatise on the Skin now possesses — to say nothing of numerous other evidences of the same fact. We observe several methods to be adopted in works on the skin—one set of writers trust entirely to description, without plates (as Mr. Green); others depend, if not exclusively, at least principally, on plates (as Alibert); and yet others combine both methods — as Willan, Bateman, and Rayer. Mr. Plumbe's book does not exactly belong to any of these; he trusts principally to description, and gives but very few plates — nay, he maintains that good descriptions have great advantages over plates, "unless executed with extraordinary skill and at enormous expense." Now we cannot quite agree in this opinion, and we find it contradicted by Mr. Plumbe's own plan, which combines plates with description. If our author did not feel the advantage of plates, why did he give any? The simple statement of the case we conceive to be this,—that plates render all such works so dear, that they do not meet with ready purchasers; but no one, we conceive, who has to study diseases of the skin, will admit with Mr. Plumbe, that descriptions in words are not prodigiously aided by a simultaneous appeal to the eye. Neither, certainly, can we admit that the excellent engravings of Willan and Bateman "have sunk into utter inutility," although their expense renders them less generally accessible than could be desired. Nor do we think the argument of the superiority of verbal description quite a safe one for Mr. Plumbe, because, in this case, we apprehend that the minute, elaborate, and valuable work of Rayer, as translated by Dr. Willis, and containing 1238 closely-printed pages for the sum of £1 8s., must be a better bargain to the purchaser than his volume containing less than one-half that number of pages, and not nearly so closely printed. But then Mr. Plumbe's volume has four very good plates; and here again is a practical contradiction of his own position. In fact, the object of our author's remarks about the relative value of plates and text seems to be pretty much this — to intimate that his volume contains just so much text, and just so many plates, as to occupy the golden medium between the two extremes.

Though we smile at the special pleading on the above points, we by no means wish to speak disparagingly of Mr. Plumbe's book. Quite the reverse; we really think very favourably of it. The present edition contains two additional figures, and has numerous extracts (some of them amounting to ten or twelve successive pages), from the translation of Rayer, &c. We recommend to him to follow the French author in another respect—namely, to accompany his fifth edition (for we doubt not we shall see it at no distant period) with an atlas, on the plan of his fellow-labourer in the same field. At present Rayer's book is, in reference to the quantity of its materials, by far the cheapest: next to it comes the one before us.

Theoretisch-praktisches Handbuch der Chirurgie. (Theoretical and Practical Manual of Surgery.) Herausgegeben von Dr. J. N. Rust. 1830-1836. Berlin und Wien. Schloss.

The Germans have evidently a much more enlarged idea of the nature of a manual or handbook than we have, when they call by that name a work, like that before us, in seventeen goodly octavo volumes. It is what we should call an encyclopædia of surgery, alphabetically arranged; and so far as we have had an opportunity of examining some of the articles, it is a production worthy of the learned editor and his able collaborateurs. Dr. Rust has written a very considerable number of the articles himself, and seems to have carefully superintended all, so as to give a uniformity and consistency to the whole. A very useful supplement, in a thin octavo, accompanies the work, presenting a systematic view of

the theory and practice of surgery, in the shape of a *catalogue raisonné*, with abundant reference to the contents of the volumes. To the scientific surgeon, familiar with the German language, this publication must be invaluable.

Handwörterbuch der reinen und angewandten Chemie. (Dictionary of Chemistry, pure and applied.) Herausgegeben von Dr. J. Liebig und Dr. J. C. Poggendorff. Erste und Zweite Lieferungen. Braunschweig, 1837. Schloss.

Handwörterbuch der Praktischen Apothekerkunst. (Dictionary of Practical Pharmacy.) Von W. L. Bachmann. Nürnberg, 1836.

Of the first of these dictionaries we are inclined to form very sanguine anticipations: the names of the editors are indeed a strong guarantee for its success; but there are as yet only two parts out, and the whole is announced as likely to extend to five volumes. We shall be anxious for its steady and regular appearance until complete. Of the second work, we can only say that it is likely to be useful as a dispensatory; it is to be completed in two volumes.

Aufsätze und Abhandlungen aus dem Gebiete der Medicin, Chirurgie, und Staatsarzneikunde. (Essays and Papers on Medical, Surgical, and Medico-legal subjects.) Von Dr. J. N. Rust, &c. Zweiter Band. Berlin, 1836. Schloss.

We noticed the first volume of this collection some time ago. The papers now published are of a similar character: they are chiefly surgical; but the appendix contains some of a miscellaneous nature,—particularly an interesting account of hydrophobia. An excellent representation of a dog labouring under rabies appears as a frontispiece.

Handbuch der Medicinischen Klinik. (Manual of Medical Clinic.) Von Dr. M. E. A. Naumann, Profesor der Med. zu Bonn. Sechster Band. Berlin, 1836. Schloss.

This sixth volume of a work much esteemed in Germany, though we believe little known here, is chiefly occupied with remarks on urinary and calculous diseases.

MEDICAL GAZETTE.

Saturday, January 14, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE MYSTERIOUS MEDICO-LEGAL CASE.

Last week we published Mr. Girdwood's account of the examination of the woman's body found in the Edgeware Road; in the present number we give the examination of the head, for that part has since been found, under very curious circumstances. It is difficult to say exactly how much of the mystery has been cleared up by this fresh discovery: some light, however, has been gained by it. There is a severe contused wound upon the head, apparently inflicted during life; all the other marks of violence were attributable to its having been so long in the canal, tossed about and struck by the boats passing and repassing. The legs have not yet been found, but no pains are spared by the police to come at the "heart of the mystery." In time, we suppose, it will all out, though there is no immediate likelihood of such an occurrence.

Two opinions are prevalent regarding the discovery of the body; either there has been a most deliberate and daring murder committed, or some person or persons have outraged public decency by mutilating and exposing a dead body in a grossly wanton manner. The weight of evidence (so far as evidence has yet been attained) appears to us, we confess, to preponderate in favour of the first opinion, and we shall state briefly some of our reasons.

It seems highly probable, from the appearances noticed in the medico-legal inspection, that the woman did not die of disease — the viscera were

sound, there was no mark of medical treatment—and what seems to indicate that the death was sudden, and occurred unexpectedly, the stomach contained food—a full meal had been recently taken. As long as the head was not forthcoming, there was certainly room to doubt whether there might not be organic disease in that part sufficient to account for death: but the discovery and inspection of the head has left that room no longer; the brain was found firm, and perfectly free from disease.

The head, however, presents something more than negative evidence: there is a lesion on it which was most probably inflicted during life—such a lesion as would be produced by a heavy stunning blow. This is a strong fact; for it not only suggests the manner of death, but the revolting method adopted to make it sure. It is impossible not to imagine that the unfortunate woman was suddenly stunned by a tremendous blow, that stupor ensued, and that the perpetrator lost not a moment in decapitating and detruncating his victim. That this was done *immediately* after death, there can be no doubt, from the complete hæmorrhage that ensued: the body was drained of its blood; and what further shows that extraordinary dispatch was used, the draining still continued after the headless trunk was tied up in the sack.

The supposition that the mutilation was effected by some medical person, and the body packed up for anatomical purposes, is met by circumstantial evidence of a strongly presumptive character. The trunk was tied up in a sack, which one can scarcely refuse to believe belonged to some carpenter; the chips and shavings of wood at the seams of the sack, the peculiar cord with which it was fastened—a sort of sash-line—the rags found in it, with marks upon them such as are produced by wiping edge-tools which have been sharpened,—when in addition to this we consider the dexterous use made of the saw, we cannot fail to be struck with so many circumstances pointing out the perpetrator of the *mutilation* at least (whoever or whatever caused the death) as being a mechanic, such as a carpenter or cabinet maker. The saw is not the instrument which a medical man would use for decapitation. Besides, no medical man, unless we suppose him involved in the guilt of being at least an accomplice, would proceed to mutilate a body, almost ere life was extinct.

But what rational ground is there for supposing that the body was intended for dissection? The occupation of the resurrectionists is wholly gone: subjects for anatomical purposes are procurable with comparative facility; and there is no inducement to secrecy: on the contrary, every dissuasive from it; for a heavy pecuniary penalty attaches to any contraband or unlicensed meddling with the dead. Admitting, however, for a moment, that there was some such contraband dealing in the case, the suspicion of murder is not a whit diminished by the circumstance: whoever deposited the body at the side of the public road, and threw the head into the canal, must have known how the deceased came by her death: that death was recent; the body had never been exhumed—it was still reeking from the mutilations.

Thus, taking a general view of the facts, without entering into minor considerations, which we doubt not would still further strengthen our position, there can, we think, be little difficulty in deciding which of the two prevalent opinions is the more tenable. There may yet, possibly, be some other mode suggested of accounting for the circumstances, but at present we have no idea of any such.

It is now upwards of three weeks since the body was discovered; this is

another fact in the murder scale: if the deceased had died a natural death, is it at all likely that the certainty of such an occurrence would be concealed so long?

We have hazarded these brief and desultory remarks, because we think the subject is one on which every member of the community ought to bestow some reflection. The object of such reflection is not mere idle speculation; it may tend to the unveiling of guilt, or the removal of the imputation of crime. Nor can we allow that, in this stage of the inquiry, there is any impropriety in discussing the circumstances of the case. An inquest has been held; the evidence has been laid before the public; and the medico-legal reports, in their most authentic form, have been presented to our readers. Why, then, should there be any obstacle to discussion? The case would be very different if there were an accused party in question—if any particular individual awaited trial for the alleged crime. But at present judicial inquiry is at a standstill; it is difficult, then, to see how the ends of justice can be better forwarded than by a free canvassing of the facts already ascertained.

We can only recollect one case bearing a resemblance to the present: we allude to the murder of M. Ramus, which occurred at Paris in the year 1832. The head of the victim was found in the Seine, his legs in another part of the river, and the trunk in the sewer of one of the streets. The discovery of the mutilated remains was made within a week after the murder; for a murder it proved to be: the unfortunate Ramus was first stupefied with brandy and prussic acid, and then immediately cut to pieces. The mutilations were effected with a butcher's knife. In about six weeks after the medico-legal inquiries, the murderer was discovered; he confessed the manner in which the crime was committed, and it exactly tallied with what was inferred previously by the medical jurists.

By the way, if the Edgeware Road case had occurred in Paris, we cannot help thinking what a *sensation* it would have produced in the medico-legal world: how many voluminous reports, and with what formality, would have been drawn up, signed, and attested! Here there is a perfect contrast in this respect: we have no special practitioners appointed to investigate cases of this kind; the parochial surgeon of the locality is immediately applied to—in the present instance, fortunately, a very competent and able person to be entrusted with such a task; his reports and evidence are received as all-sufficient, and justice proceeds in her inquiries without deviating in the least from her ordinary course.

THE INFLUENZA.

This epidemic, of the prevalence of which in Scotland the newspapers have recently given us notice, is now at length prevalent in the metropolis, to a very great extent, and in many instances with considerable severity. In addition to the symptoms of catarrh many have giddiness, pain under the sternum, or at the pit of the stomach, oppressive headache, and a frequent but generally a soft pulse. There is often much thirst, and the appetite is for the most part almost entirely gone. In all there is great feeling of languor, and the convalescence is very slow. In some the chest affection is very formidable, being accompanied by inflammation of the wind-pipe and air-passages generally; in others there is inflammation of the lungs or pleura. Most of the medical men in London have been in full employment for the last week, and some of them are quite overwhelmed with business. By the way,

the "general practitioner" has an immense advantage over the physician in such an epidemic. The latter, who may see, perhaps, five or six, and sometimes even more members of a family, generally gets but his usual *honorarium*, of a guinea, for his visit; the former having to furnish each patient with medicine, lays all under contribution, and thus a visit to one family is as productive to him as to five or six ordinary patients.

THE NEW UNIVERSITY.

Lord Brougham has withdrawn his name from the New University—a fact strongly indicative of his opinion as to the chance of its success.

Dr. Locock's name does not appear in the published version of the charter, although he holds a seat in the Senatus: we presume that he has some "friend at court," who procured its omission as an act of kindness.

REPORT

OF AN

EXAMINATION OF THE HEAD OF A FEMALE

FOUND UNDER MYSTERIOUS CIRCUMSTANCES; WITH REMARKS.

By G. F. Girdwood, Esq.

A sealed parcel, obtained from the superintendent of the police, was opened by Mr. Girdwood, in the presence of Mr. Thornton, the churchwarden, and Mr. Bennett Lucas, Lecturer on Anatomy; Mr. Birtwhistle, Surgeon, Mile End; Mr. Webster, Surgeon, Connaught-Terrace; Mr. Trewick Jones; and Mr. Parrott; the parcel was identified by Mr. Birtwhistle as the one found in the canal, near Mile End.

The head is that of a female, and of a middling size; the skin is fair; the hair is of a brown—a dirty brown colour, with a trace of grey here and there in it, the longest tresses two feet long.

The eye-brows are well marked, and, with the eye-lashes, which are not very long, are of a dark-brown colour. The eye is grey, with a shade of hazel in it. The frontal sinuses are strongly marked, and extend over the eye to the outer edge of the orbit. The nose is at the upper part flat, and a short way above the point, is depressed; the tip itself has a slight twist to the right side, occasioning the right nostril to be somewhat more dilated than the left. The mouth is middle-sized. The lips large, more especially the upper, and prominent. The front teeth are good; the enamel at the points of all of them is much worn from friction; they were, of course, in life, directly opposed to each other. The chin is small, and round; but its exact shape cannot be well ascertained on account of its mutilated state, and from fracture of the lower jaw, on the left side.

The profile struck all of us as being very much that of the lower order of Irish.

The ears are flat; and there is the mark of pressure on the upper part of the concha; both ears are pierced for the ring; the left ear for that purpose has been pierced a second time, the original hole having apparently given way from being too near the edge of the ear. This circumstance, we are satisfied, has not been recent, the notch being completely skinned over.

The section which has removed the head from the body proceeds across the neck anteriorly through the skin, immediately under the fold formed by the junction of the chin with the neck, as far as the sterno-cleido mastoideus muscle, on each side; it then becomes jagged in appearance, and slants downwards nearly two inches, so that the posterior cut of the neck is exactly on a line with the section of the vertebral column.

On examination, it is found to be the fifth cervical bone that is sawn through, leaving the posterior spinous process. The sterno-cleido-mastoidei muscles are retracted about an inch; the carotid is also somewhat retracted.

The face is very much bruised and wounded; the under-jaw is fractured on the left side, opposite to the second bicuspid, and the coronoid process on the right side is also broken.

One wound only presents an ecchymosed appearance. It is one received on the right eye. Around this organ exists a broad ecchymosis, extending

downwards as far as the end of the nose. The cheek under the eye is puffy. The eye itself is wounded, ruptured, and collapsed, all the humours having escaped.

The wounds that have no ecchymosis around them are, one on the nose on the right side, another over the external commissure of the right eye, another on the right cheek under the zygoma, a large bruised one over the lower jaw on the right side (being evidently the same injury that has fractured the bone), another on the right commissure of the mouth, tearing the cheek through for about half an inch, and a very large wound, in the form of a crescent, on the left cheek, extending from the internal edge of the orbit to about an inch external to the left commissure of the mouth, and under it is another bruised wound, apparently proceeding from the same cause that broke the under jaw on the left side; there is also a wound of the scalp, near the crown of the head, also without effusion around it.

An incision was made through the scalp from ear to ear, and the flaps turned anteriorly and posteriorly. A large ecchymosis presented itself, three inches in diameter, on that part of the periphery of the cranium exactly opposite to the right eye. There is a little coagulated blood under the scalp, and the scalp itself is thickened.

On raising the calvarium, the dura mater was of a natural colour, except opposite to the situation of the bruise just alluded to it was redder, and some bloody serum was effused underneath it. The larger vessels, usually filled with blood on the surface of the brain, were empty. The arachnoid membrane presented a few opaque patches. Sections made throughout the cerebral mass and cerebellum, presented no abnormal peculiarity.

The wound of the right eye had not injured the orbitary plate.

The body, without head and legs, on which an inquest was lately held, was exhumed. The head now under examination was placed with the two cut surfaces of the neck in apposition; they were found in every way exactly to correspond, even to the superficial cut noticed at the inquest as existing on the right side of the neck.

The head and trunk, when placed together in a manner so as to ensure accuracy, were found to measure in length 33 inches.

The report that has already appeared in the GAZETTE was confined to medical facts, with the exception of some allusion to the appearance of the bag. The child's dress and pieces of rag placed round the body, and the cords that bound it round, were minutely examined. The dress is sufficiently described.

The two pieces of rag were coarse calico: they were in part dry, in part clotted with coagulum, and wet with serum. In addition, they were stained with something black and greasy: these marks, when rubbed by the finger, so as to make a smooth surface, showed many minute glistening points, like plumbago or the oily side of a razor-strop. Most of them were without any definite shape, but several were straight in one of their edges; and one more especially presented the impression of something whose edge must have been slightly acute — something less than a right angle. The pieces of cord consisted of a bit of common cord, a bit of blue blind-line, and a bit of sash-line, much worn at one end, and particularly on one side of the line.

Referring to my former report, it may be added, that the carunculæ myrtiformes existed; and that where the spots appeared in the small intestines, there was no corresponding structural derangement on either the mucous or serous surfaces.

An interesting question or two suggest themselves in relation to the body. The fact of the death being sudden, and whilst in health, and shortly after a meal, is already disposed of; how, then, has this person met her death?

The state of the wound of the eye, with the bruise on the occiput correspondent with it, differing from all the other wounds and bruises, by having coagula and ecchymoses upon them, and evidently both produced by the same blow, imply their occurrence before death. This blow was enough to occasion stupor, if not death.

The incision around the neck, the cut through the skin being two inches above the cut that separates the trachea and vertebra, implying thus much retraction of the skin while the operation was going on, suggests the idea that

the decapitation was performed with the head in a depending position, and so, probably, after death.

Another question has occurred;—who has been the agent in this affair?

The bag, the cloths, used evidently to wipe edge-tools after being sharpened —the blind-line, the sash-line, worn exactly in the manner in which the pulley passing it would have worn it—form a group of circumstantial evidence pointing out the *employment* of the individual. His trade, in all probability, was that of a carpenter.

148, Edgeware Road,
Jan. 12, 1836.

DISTURBANCE IN THE BOROUGH.

We cannot suffer the following letter to pass without some remark: what we have to say shall be subjoined.

To the Editor of the Medical Gazette.

Sir,

By the manner in which you have alluded, in your last number, to the late disturbance at St. Thomas's Hospital, you have (perchance unwittingly) raised a prejudice against an accused and unheard party, in a way which is scarcely consistent with the duties of a British journalist.

The discredit of that transaction is made by you to rest solely with the students of Guy's Hospital, for which your only authority must be the *ex parte* statement of their accusers. Their defence is still unknown to you; and as the cause now awaits the decision of a jury, you have not only assumed as correct that which remains to be proved, but have conveyed an impression to your readers to the prejudice of gentlemen who are compelled for the present to lie under an accusation, the proper opportunity for answering which has not yet arrived.

None are more ready than the accused to agree with you in denouncing the disturbance as "a most discreditable affair," and none would have more gladly witnessed its conciliatory termination; but the gravity of the charges publicly made against them, and the manner in which they are urged, have left them no alternative.

As defendants, they court, and will now secure, the fullest scrutiny; and no responsibility will attach itself to them if the result should be otherwise than their accusers anticipate.

Your remarks upon the unsolicited notice taken of the transaction by another journalist, plausibly as you have proffered them, and your subsequent allusion to the recent outrage at Apothecaries' Hall (which was perpetrated by a pupil of St. George's Hospital), are so obviously irrelevant to the question, that we forbear to allude to them further than to express our astonishment that you, in your editorial capacity, should have associated them under the title of "Recent Disturbance at St. Thomas's Hospital."

As our object is sufficiently explained by this letter, which we trust that you will insert at the earliest opportunity, we will only add the hope that your journal will not be made the vehicle of party communications, which must of necessity be premature, and can effect no useful purpose. The accused and their friends are well content to abide the time when the part which each has acted will be investigated in all its bearings.—We are, sir,

Your obedient servants,
T. Wilkinson King.
Alex. Tweedie.
Charles Gaselee.

Guy's Hospital,
Jan. 9, 1837.

It would be difficult to imagine any confirmation of the justice of the remarks which we made last week, or of the extent to which they were called for, more strong than is afforded by the preceding letter. So far from being anxious to "raise a prejudice," or to speak harshly of the accused parties, we attributed what had passed to "a moment of youthful impetuosity," and expressed our deep regret that some accommodation had not been effected, as the course most accordant with the interests of all. But it is clear that our correspondents are equally indignant at the idea of any portion of blame attaching to the gentlemen of Guy's, and at our presumption in offering them advice.

The assumption that the only authority we can have for our opinion is the *ex parte* evidence of their accusers, is incorrect; we were guided entirely by the statements on both sides, as adduced before the magistrates. Neither have we any where said that the discredit of the transaction rests

" solely with the students of Guy's Hospital;" but we remarked, that the scene which occurred was one of " unwarrantable violence," even although it might have occurred in " the maintenance of a right."

The assertion that our reference to the part taken by the Lancet, and to the affair at Apothecaries' Hall, is " irrelevant," leads us to doubt whether the parties understand the meaning of the expressions they employ. Our object was to caution those concerned against supposing that they were on the right side because the Lancet happened to take up their cause; for, as we observed, to serve his own purposes, " Mr. Wakley endeavours to identify himself with the pupils, even where they may be wrong," and we illustrated this by alluding to the striking fact, that he went so far as to justify the personal assault made on the members of the Court of Examiners—than which, so far from being " irrelevant," we maintain that an example more apposite could not possibly have been adduced.

To the hope that our journal will not be made the vehicle of " party communications," we must answer by reminding our correspondents, that they were themselves the parties who began, and who continue, the publication of *ex parte* statements; and that, to comply with the wish they now express, it would be necessary to exclude their own communications.

The fact is, that so far from having been the vehicle of " party communication," this journal, *and this journal alone*, has been equally open to the statements from Guy's and St. Thomas's indifferently; nor can a stronger proof of our impartiality be given than the insertion of such a letter as the preceding.

If the letter addressed to us is to be received as indicative of any thing more than the opinion of those who attach their names to it, we can only regret that there should be any who suffer their feelings to be so much excited as to blind their judgment. In a cooler moment they will distinguish between the disinterested and conciliatory advice of a journal (which, however, will never either flatter or truckle to them), and the dishonest artifices of our contemporary, who notoriously takes delight in fostering every dissention, and fanning every spark into blaze. His supporting what was obviously wrong, and his unparalleled insolence towards the officers of St. Thomas's, have done those implicated in this affair infinite mischief; and whatever the result may be with regard to individuals, we have no doubt that a total separation of the hospitals will ensue—to the irreparable injury of both.—Ed. Gaz.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 10, 1837.

Mr. Earle, President, in the Chair.

A paper, by Dr. Hume Weatherhead, on the subject of Inflammation, was read this evening; but in consequence of its length, there was no time left for discussion. On the motion of Dr. Clendinning, seconded by Dr. Johnson, it was arranged that a discussion of the paper shall take precedence of other business on the next night of meeting.

We are prevented this week, through want of space, from giving an abstract of the paper; but it shall be published in due time for those who wish to canvass its merits.

Mr. Earle, before adjourning the meeting, introduced to the notice of the society the Mouth Respirator, lately invented by Mr. Jeffreys, with a strong testimony in its favour: he also mentioned that the inventor himself was present, and would be happy to explain the principles of his ingenious contrivance.

Mr. Jeffreys then gave an account of the various steps by which he brought the instrument to its present state; but as we have noticed Mr. J.'s pamphlet in another part of this number, it is unnecessary to enter into further particulars here.

WESTMINSTER HOSPITAL.

Malignant Tumor of the Mammary Gland.

Dec. 24th, 1836.—This day Mr. Hale Thomson, the assistant-surgeon, amputated the nipple and a portion of the left mamma of Mary Wayland, a woman abont

45 years old. The patient has been married several years, but never had any children, nor ever conceived; and for the last two or three years the menses have become gradually more and more scanty: they still appear regularly.

In the summer of 1834 she was in service; and being employed in washing a dog belonging to her master, the animal, in his efforts of resistance, sprung up and struck his head against her left breast. She experienced considerable pain at the moment; this subsided in a short time, but returned at intervals for three or four months.

After this lapse of time she sought medical advice. Leeches were regularly applied three times a week to the affected part, for a considerable period, and various topical remedies were resorted to, with partial success in alleviating the intermittent pain. About twenty months ago, however, a stillation of a dark fluid, very similar to, if not identical with, venous blood, commenced from the injured nipple. This discharge has continued unremittingly ever since, and has uniformly amounted to several drachms a day. After the regular appearance of this sanguinolent issue, the fits of pain became less frequent and pungent, but a soreness was always perceptible on handling the breast.

She was admitted into this hospital on the 29th day of last November. At this time the soreness of the breast was undiminished, and a hardness of the gland was detected. The morbid secretion still continued. Several palliatives have been used without benefit; and to prevent the disease from assuming a more decidedly malignant character, amputation was determined upon.

The part was excised in the usual manner, by two elliptical horizontal incisions. The cellular tissue was removed clean from the surface of the pectoral muscle. Upon cutting into the tumor, a third only of the mammary gland was found diseased. The lactiferous tubes leading to the morbid portion were enlarged, and their lining membrane apparently injected. The veins proper to the part were grown as large as crow-quills. The condition of the surrounding cellular tissue was materially changed, and, in the opinion of some judges present, possessed some characters not unlike incipient carcinoma. The consistence of the cellular membrane, for some distance indeed round the affected part, was certainly firmer than natural.

Dec. 27th.—The patient has experienced no untoward symptom since the operation, and the wound promises to heal by the first intention.

POISONING WITH ARSENIETTED HYDROGEN GAS.

Cases of poisoning with this substance being rare—not more than one or two, in fact, being on record—the following paragraph, which we transcribe from a Cornish paper, will probably be considered interesting:—"On the 5th inst. (December 1836) Mr. J. E. Bullocke, son of Mr. Bullocke, of Penzance, who has for some time resided with Mr. Beard, chemist, in this town (Falmouth), delivered a lecture on the Gases, at the Mechanics' Institute; and, on the 19th, performed a series of experiments in illustration of that lecture. Amongst others, he hazarded an experiment with the arsenietted hydrogen, procured by pouring sulphuric acid on arseniate of zinc: but the gas-jar not having as much water in it as he (being near-sighted) supposed it had, and the atmospheric air above the water diluting the gas, he inconsiderately applied his mouth to draw up the atmospheric air, while the process of generation was going on, and unhappily inhaled a portion of the gas; which being highly poisonous, affected his whole nervous system, and ultimately his lungs. The case baffled the skill of his medical attendants; and although for several days no alarming apprehension was entertained, to the great grief of his father and sister, and a circle of attached friends, he died yesterday (29th)."

POISONING FROM A VIPER-BITE.

CURE WITH SULPHATE OF QUININE.

A countryman, forty-four years of age, was bit by a viper between the fore-finger and thumb of the right hand. On the following day, when admitted into the hospital, the whole extent of the right arm was enormously swollen, and its surface was of a livid red colour. The face and trunk had a jaundiced hue, and the extremities exhibited diffused patches of redness. There was great prostration of all the vital powers; the pulse was scarcely perceptible; the body was bedewed with a cold clammy sweat; the face was convulsed, the pupils dilated, the breathing laborious, and there were frequent efforts of vomiting. Dr. Butazzi, calling to mind the results of some cases recently published in the Filiatre and in the Revue Méd., prescribed quinine in large doses, three grains to be taken in a spoonful of wine every hour.

On the following day, the arm remained as much swollen as before, the pulse was scarcely to be felt, and the patient com-

plained of pain in every part of his frame: the dose of the quinine was increased to four grains. On the next day there was a decided amendment; a copious warm perspiration had taken place, the discoloration of the surface abated, and the features were recovering the character of health. The swelling of the affected arm gradually from this time subsided, and, under the use of oily embrocations, altogether disappeared. Two drachms in all of the quinine were taken in the course of between two and three days.—*Filiatre di Napoli; and Dublin Journal*, Jan. 1837.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN DECEMBER.

J. Floyd, Londonderry.
G. B. Fry, Dublin.
W. N. White, Dublin,
P. Rogers, Buttevant, Cork.
J. Lambrick, Whitchurch, Salop.
B. U. Hamilton, Dublin.
J. Springall, Guildford, Surrey.
H. Jackson, Petworth.
W. Pilling, Manchester.
Arthur Dobbs.
C. Trenerry, Gibraltar.
J. Holland, Yewsbury, near Uxbridge.
G. Smith, Dilhorne, near Stone, Staffordshire.
C. J. Cox, Finchley.
W. Ainley, Leeds.
W. Scott, Shaddingfield, Suffolk.
J. Dowe, Skibbereen, Cork.
W. T. Hudson, Cambridge.
T. James, Uxbridge.
A J. Nunn, Whiteparish, Wiltshire.
Edward Foaker, Calcutta.
F. Nesbitt, Exeter.
F. M. Walker, Chesterfield
H. Taynton, Queen Sqr. Bloomsbury.
G. J. Perry, Henbury, Bristol.
Thomas B. Larkins, London.
C. Robinson, Weston, Bath.
J. W. Tillett, Colchester.
J. M. Field, Hatherley, Devon.
T. Shaw, Kirkham, Lancashire.
C. Ray, Finchley,
J. Wood, Manchester.
S. Yarrow, Loughborough.
S. Garrend, Olney, Bucks.
W. Percival, Northampton.
A. Vallack, Sidney, N. S. W.
J. B. Nottage, Lancaster.
E. Boult, Chester.
W. D. Beard, St Kitts, W. I.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

January 5, 1837.

William Howett Edwards, Peterborough.
George Rigden Ruding Court, Kent.
Nathaniel Whitchurch, Melton Mowbray.
Parmenas Langley, Checkley. Staffordshire.
Emanuel Dommett, Frome, Somersetshire.
Francis Booth, Nafferton, Yorkshire.
George Octavius Hopton, Durham.
John Powell Wilding, Wallybourn, Salop.
William Parkinson, Hollin Grove.
John Elkington, Birmingham.
Martin Harsant, Earl Soham.

January 12, 1837.

William Corless, Preston.
Arthur Bernard Macann, London.
James Neale, Sandwich.
William Henry Hugo, Crediton.
James Malthouse, Harrogate.
John Robinson Wells.
Edward Sugden, Skipton.
Charles Lewis Crosswell, Newport, Pembrokesh.
John Parkin Payne, Loxhy, Yorkshire.

NEW MEDICAL BOOKS.

Practical Observations on Palpitation of the Heart. By J. C. Williams, M.D. 8vo. 6s.

The Nature and Treatment of Dropsy. By E. J. Seymour, M.D. 8vo. 6s.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 10, 1837.

Age and Debility	38	Inflammation	22
Apoplexy	12	Lungs and Pleura	7
Asthma	30	Insanity	1
Childbirth	3	Liver, diseased	11
Consumption	49	Measles	7
Convulsions	27	Mortification	2
Croup	1	Paralysis	2
Dentition or Teething	3	Small-pox	13
Dropsy	19	Sore Throat and Quinsey	2
Dropsy in the Brain	5	Thrush	1
Dropsy on the Chest	3	Tumor	1
Erysipelas	1	Venereal	1
Fever	4	Unknown Causes	4
Gout	1		
Hæmorrhage	1	Casualties	7
Heart, diseased	1		
Hooping Cough	5		

Increase of Burials, as compared with the preceding week . . 56

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1837.	THERMOMETER.		BAROMETER.	
Thursday . 5	from 29	to 37	30·10	to 29·85
Friday . . 6	35	47	29·61	29·57
Saturday . 7	33	42	29 54	29 79
Sunday . . 8	25	37	30·04	30·15
Monday . . 9	31	48	30·09	30·07
Tuesday . . 10	41	49	29·72	29·84
Wednesday 11	20	33	29·98	30.08

Wind S. and S.W.

Alternately clear and cloudy; rain on the 6th and 10th.

Rain fallen, ·25 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

Mr. SWEETING's letter, though dated the 3d, did not reach us till the 9th inst.

A SENIOR STUDENT's (L. T.) remarks are rather too severe, as he would himself confess, were he acquainted with the person against whom his strictures are directed.

ERRATA.—In Dr. Ramsbotham's letter, last number, page 555, col. 2. line 16, *for* men *read* man; and page 556, col. 2, line 6, *for* bloody matter *read* bloody water.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 21, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XVII.

Further consideration of the Births of Children—Single and Plural Births—*Order of the Births—Earliest medico-legal case on record—Legal evidence of priority of Birth—Frequency of Plural Births—One or two old cases—Twins born at intervals.* Question of Superfœtation—*Occasions for such inquiry—Conditions of Superfœtation—Illustrative Cases—Conceptions supervening at considerable intervals—Production of different Races at one Birth—Objections to the Doctrine of Superfœtation—Supposed closure of the Os Uteri—Formation of a Decidua—Superfœtation in a Double Uterus—Cases—General Conclusions as to the possibility of Superfœtation—Authorities for and against the Doctrine.*

The next point of view in which the births of children are to be considered is as they occur singly or plurally.

SINGLE AND PLURAL BIRTHS.

Occasion and antiquity of the inquiry.—To the medical jurist the subject of plural births is important, chiefly with reference to the order in which they occur. Wherever the law of primogeniture prevails, as it does in this country, it is most material that when two or more children are born together, it should be observed, beyond the possibility of dispute, which of them came into the world first. It is worth noticing that the very earliest instance on record of the exercise of medico-legal functions, relates to the ascertaining in a twin case which child was the first born. When Tamar was in labour, one of the twins which were in her womb "put out his hand; and the *midwife* took and bound upon his hand a scarlet thread, saying, this came out first. And it came to pass as he drew back his hand, that behold his brother came out; and she said, how hast thou broken forth? this breach be upon thee; therefore his name was called Pharez. And afterward came out his brother that had the scarlet thread upon his hand; and his name was called Zarah." (*Gen.* xxxviii. 28.)

So it appears it was a midwife who took this medico-legal precaution: but we must not be scandalized by the fact of a female practitioner being the first medical jurist of whom we have any account, for the earliest medical practitioners, of whatever kind, of whom there is any authentic record, were neither more nor less than members of that respectable sisterhood—the midwives.

Legal distinctions.—In cases concerning pedigree, the declarations of relatives are admitted in evidence, to the exclusion of the testimony of mere acquaintances and menials. But the evidence of the medical attendant who may have been present at the birth, is considered superior to any other that can be adduced. The proof of primogeniture depends on the fact of which of the children was actually first delivered; for the ascertaining which fact no one has a better opportunity than the medical man who happens to assist at the labour.

There is a remarkable case on record, which shews how the law decides the question of primogeniture, where there may be no medical evidence to be had—the testimony of an eye-witness being preferred to that of any other authority. In a family of eight children, of which the three youngest were born at one time, and the five eldest died, the priority of birth of the surviving three was questioned in a

suit brought for the inheritance. The names of the children were Stephanus, Fortunatus, and Achaicus, three names which are to be found in this order at the conclusion of St. Paul's epistle to the Corinthians. Evidence was given of the declarations of the deceased father, that this was the order of their births; but this evidence was outweighed, in the opinion of the jury, by the evidence of a declaration of a deceased aunt, who was *present* at the birth, and who used to say, that she tied a string round the arm of Stephanus immediately after he was born, in order to denote that he was the second son.

Frequency of plural births.—A few remarks may here be made on the comparative frequency of twins and triplets: with a word or two on other plural births.

The proportion of twin cases varies in different countries; thus in France and Scotland the ratio is one case of twins to every 95 births; in Germany one in 80; in England one in 92; in Ireland one in every 62. It is calculated that triplets do not occur in more than one case out of 4450 (one in 6500, according to Süssmileh); nor quadruplets in above one in 100,000. Dr. Garthshore records a case in the Philosophical Transactions for 1787, where there were *five* children born at a birth; and this is perhaps the largest number born at once, recorded on good authority by any modern writer.

One or two old cases.—Were we to listen to the statements of some of the old authorities, we should find that seven, nine, nay thirty-six, have been brought forth at a birth. Sigebert, in his Chronicles, and Paul the Deacon, relate a curious history. A woman having given birth to seven children at once, they were immediately taken from her, and, like a litter of puppies, thrown into a pond; but Agelmund, King of the Lombards, happening to pass that way, put in his spear, when one of the infants clung to it, was taken out, reared and educated, and ultimately succeeded to the throne. Erasmus and others have noticed the remarkable fecundity of Margaret, Countess of Holland, who, in 1276, brought forth at one birth a progeny as numerous as the days in the year. They were all put into a basin together, where they died the moment they were baptized. An ingenious interpreter has given an explanation of this case, which brings the marvellous within the bounds of credibility. The Countess, instead of 365, gave birth to no more than two or three children; but happening to be confined when there were only a few days of the old year left, it was observed by some one that she brought forth as many children as there were days in the year!—and so the story spread.

Viability and other conditions of plural births —In plural births the children are almost always diminutive, and less lively than when born singly. In twin cases, for example, each child generally weighs less than a single birth, though taken together they are heavier than a single child. It happens, however, that in some rare instances each of the twins is as heavy as an ordinary single child; thus Dr. Collins, in his Practical Midwifery, mentions a case in which he says, "both children were natural presentations: the first, a boy, weighed $7\frac{1}{2}$ pounds; the second, a girl, 8 pounds; with twenty minutes interval."

It will, perhaps, have been noticed in the table given in last lecture, that more than three children at a birth constitute a *monstrosity*, and are not capable of continuing to live. There is, I believe, no authentic example of quadruplets surviving for any considerable length of time.

The interval that may elapse between the successive births—for the births are always successive, though said to occur simultaneously—is uncertain. In midwifery practice it is not usual to allow any considerable time to intervene. If, after the lapse of half an hour, the membranes of the second child still remain unbroken, they are punctured, and uterine action thus excited: should two hours more pass away without delivery, the feet are brought down, or the forceps applied; for it is generally found that the second child is still-born, if left longer than two or three hours unassisted.

Question of Superfœtation.

There are instances of longer intervals between the births—so long as to raise the question, whether the children might not be the issue of successive conceptions, the product of superfœtation—or in other words, whether a woman already pregnant might not conceive again?

Occasions of inquiry. — I may give an example or two of the mode in which questions of superfœtation may be raised in the courts. A widow is pregnant at the death of her husband; she marries in three or four months after; at the expiration of nine months from the first husband's death, she brings forth a child, and in three months after another. Is this a case of retarded twin birth, or one of superfœtation? Again: a married woman, after having given birth to one child, may in the course of some months produce another, which is either illegitimate, or the product of superfœtation.

Finally, a woman after producing a dead child, may pretend superfœtation for the purpose of introducing a supposititious heir; or she may pretend to carry the

fruit of a second conception, with the object of enjoying the privileges and immunities of pregnancy.

In all such cases it will obviously be the duty of the medical jurist to inquire, first, whether the supernumerary pregnancy exist, and then to ascertain, if possible, whether it be really a superfœtation, or only a retarded birth.

Conditions of superfœtation.—Whatever be the issue brought forth at one birth, or about the same time (unless it consist of different races—as a white, or a negro, and a mulatto), may reasonably be imputed to a single conception.

Again, there are numerous examples of mature fœtuses being born along with others which appear to be no more than three, four, five, or six months. In such cases it is not necessary to have recourse to the supposition of superfœtation, for we can conceive the immature offspring to have ceased to be developed at the age which it indicates; and even though such issue be born successively, they do not necessarily imply successive conceptions.

Nor, if two children be born with about a month of difference in the time of birth, yet the first appear somewhat immature, say with the characteristics of an eight months fœtus, while the second is perfectly mature, does this imply distinct conceptions.

But when we find two mature children, born of the same woman, with two or three or more months between the births, the supposition is inevitable that there has been superfœtation. The interval of some days, seven, for instance, ten, seventeen, or twenty (for there are cases to this extent reported), do not warrant our inferring the issue, though mature, to be other than twins: even a month may only leave the question doubtful.

Examples. — Among the cases cited by Haller, there are the following:—Successive births, with an interval of two months, each perfect; a fœtus born three months after another, both living and healthy; one born six months after another, but feeble; two lively and strong fœtuses, one born on the 31st July, the other on the 9th February, so that the latter must have been conceived when the former was about eighty days old in intrauterine life.

Some cases more recent are perhaps not less remarkable. Mary Ann Bigaud, a woman of Strasburg, aged 37, was delivered of a lively child on the 30th April. The lochia were presently suppressed, and so was the milk: in short, on the 17th September following she brought forth another apparently mature and healthy child, that is to say, in about four months and a half after the first,—which could not well occur without superfœtation. The woman died seven years after; and it was expected that she would be found to have a double uterus; but there was nothing abnormal detected about the womb when the body was examined.

It may as well be mentioned here, that such a thing as a true double uterus has never been discovered in the human species; that is to say, two cavities, with a pair of fallopian tubes, ovaries, and appendages, attached to each; but there have been frequent instances of bilocular uteri, with the fundus double, and a septum in some cases continued down into the vagina; the latter peculiarity, however, is comparatively rare, and the more common form of abnormal structure is of this kind. This drawing represents a vir-

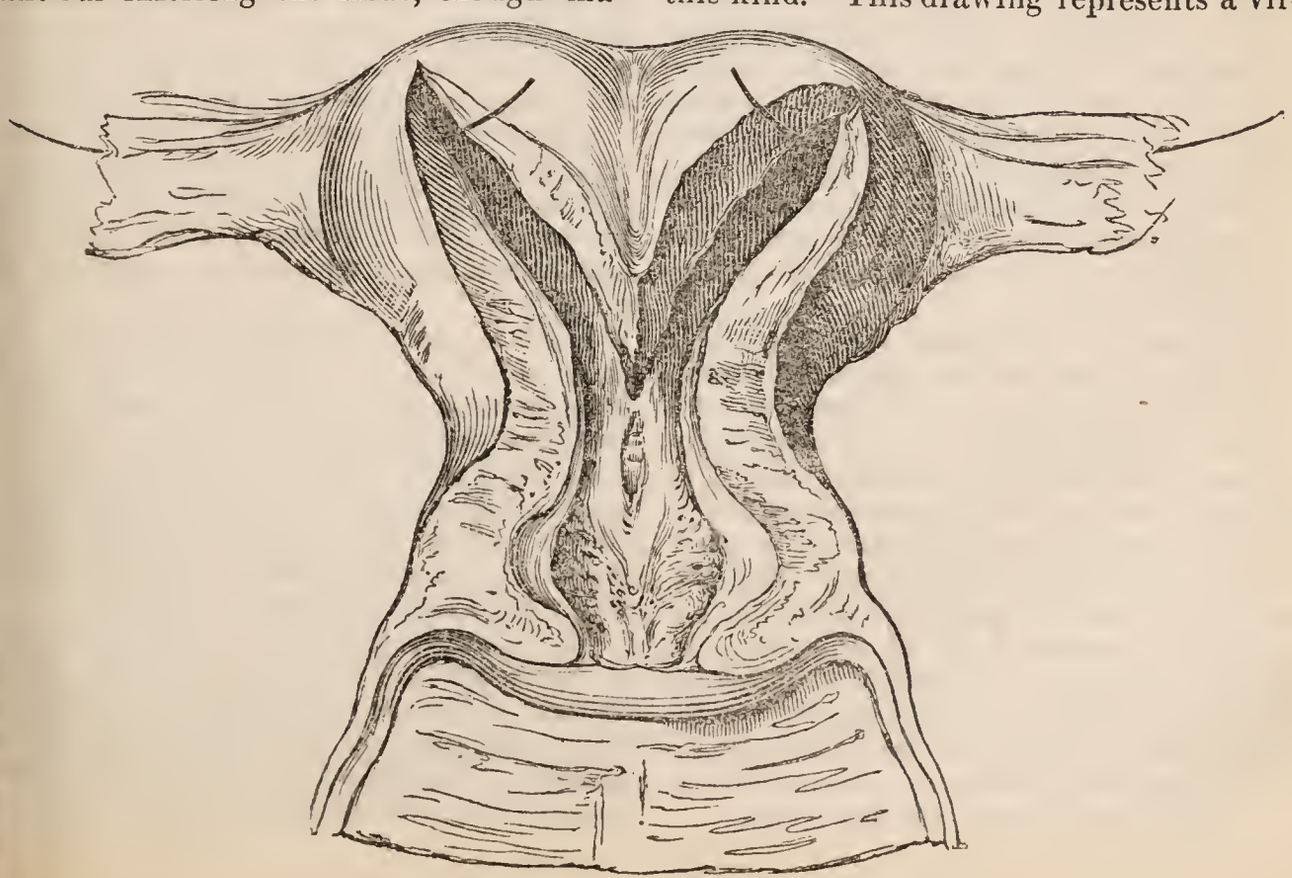

FIG. 21.—*Example of a bilocular Uterus.*

gin uterus which was partially bilocular. The length from the fundus to the os uteri was $3\frac{1}{4}$ inches; the greatest breadth 3 inches; and the length of the septum found between the two cavities into which the internal space was divided, measured $1\frac{3}{4}$ inch*.

A very remarkable case, which can scarcely be accounted for without admitting the possibility of superfœtation, was observed by Dr. Desgranges, of Lyons. A woman was delivered of a seven months' child; none of the usual consequences of delivery ensued; but in five months sixteen days afterwards, another infant was brought forth, which had apparently reached its full time. The only mode of evading the admission of superfœtation here seems to be, by insisting that the so-called seven months' child was no more than a four months' fœtus; or, in other words, that the first was a mere abortion, and the second mature. But it is very unlikely that an immature fœtus of four months (at which age no fœtus has been known to survive birth) would be mistaken for a lively infant of seven months. If, on the other hand, we admit this infant to be what it was represented, and still deny superfœtation, we are driven to the absurdity of supposing, that the period of utero-gestation with a living healthy child might extend to upwards of twelve months!

Some of the opponents of superfœtation endeavour to shew, that in every case so reputed, there must either be a double uterus, or the first birth is premature, though mature to all appearance. We cannot deny the possibility of the first supposition, yet we see that it was gratuitous and unfounded in the case already quoted, as it was in some others. But it is hard to admit that the second supposition is tenable: who can allow that a fœtus of five, six, or seven months, should have all the characteristics of a nine months' child, so as to be mistaken for such? The development of the embryo and fœtus is too regular to justify the supposition of such an anomaly in any circumstances.

The late Dr. Maton published a valuable case in the fourth volume of the Transactions of the College of Physicians. An Italian lady, married to an English gentleman, gave birth to a male child, at Palermo, on the 12th November, 1807; it had every appearance of health, though it died in nine days, owing to some distressing circumstances connected with the accouchement;—the lady, it appears, was hastily delivered on a bundle of straw, in an empty house, at midnight. On the 2d of February, 1808 (*three months* minus *ten days* from her first confinement), she was delivered of another male infant, completely formed, and in perfect health.

It was objected to this case, that the first child was probably *not* "completely formed," as the second alone was said to be; and that therefore it was no more than a case of twins, in which one of the fœtuses came into the world at the sixth, and the other at the ninth month of pregnancy, the ova being quite distinct and separate: the proof was deficient, it was urged, that the first child had reached the full term of utero-gestation. Dr. Paris informs us, that in consequence of these objections (which were made by Dr. Granville), he applied to Dr. Maton for further explanation, when he was told "that both the children were born perfect, the first therefore could not have been a six months' child;" nor were the "distressing circumstances" of such a nature as to cause the labour to be premature. According to Dr. Maton, the facts were these:—"The lady could not obtain better accommodation at the time; the labour, although quick, was not sudden, for the accoucheur was already in attendance; nor was it præmature, for the natural period of utero-gestation was supposed to have been completed."

This seems to be the most complete and authentic case of superfœtation on record — the births, mature and lively, having followed each other at such an interval as to render the admission of one conception supervening on another, after a lapse of two or three months, inevitable.

Mongrel offspring.—It is handed down to us in the records of the olden time, that a woman has sometimes betrayed her adultery by bringing forth two children at a birth—one resembling her husband, the other her paramour; like Alcmœna, when she bore Hercules and Iphicles, severally begotten by Jupiter and Amphitryon.

Different races.—But this is only questionable evidence of superfœtation, compared with the striking fact of females producing plural births of mixed varieties —for instance, a white and a mulatto at once.

Haller was not acquainted with any cases of this kind, or he would infallibly have quoted them. Since he wrote, however, several have been placed on record.

Dr. Garn, of Wittemberg, gives an account of a woman, who, after sexual intercourse with a European and then with a negro, brought forth twins, one of which was white, and the other a mulatto.

M. Delmas relates a case in the *Annales de Montpellier* for 1806. A woman, aged 36, was delivered, in the eighth month of her pregnancy, of a white child and a mulatto. Both died soon after. The placentæ were intermixed; and the woman

* Medical Gazette, vol. xiii. p. 898.

confesssed that she had had intercourse with a negro when she was four or five months with child.

Dr. Dewees published a similar case in 1807. A white maid-servant bore twins, one of them white and of European structure; the other dark, and of the negro cast.

Dr. Moseley tells us of a negress, who was delivered of twins in the West Indies, one of them a black, the other a mulatto. M. de Bouillon, Osiander, and others, relate similar instances of black and tawny twin births.

Now these are matters of fact, which cannot be invalidated by mere theory; for the objections to the doctrine of superfœtation are no more than theoretical.

Objections.—Many opponents of superfœtation deny the fact on the ground of non-access of the semen. They hold that one of the first consequences of conception is the closure of the os uteri—some say immediately, others after a short time. But what evidence is there of such an occurrence, which, if admitted, must preclude the possibility of further question? None, I imagine, of a very conclusive nature; while the contrary supposition, that the uterus is *not* immediately closed, but remains open for at least some time, seems to rest on quite as good grounds.

1. *Closure of the os uteri.*—This objection, old as Galen's time, and the more obstinately maintained, perhaps, for that reason, is certainly untenable, for it is not borne out by fact or experience. Women, as we have seen, sometimes continue to menstruate for a few periods after conception; nay, some have continued to do so all through their pregnancy. What can be a stronger proof of the patency of the uterine orifice? But there is a more direct one: the catheter and the finger have been introduced, without obstruction, into the pregnant uterus.

What Haller says on the point is so clear and precise as to show that his mind was perfectly satisfied. "Claudi quidem [os uteri] legas a conceptu, non sine analogia brutorum animalium. Verum nihil est ejusmodi." And again: —"Os uteri nunquam clausum est, ideoque potest superfœtari non solum a die sexto ad trigessimum, aut primis duobus mensibus, sed omni omnino tempore." In fine, after stating all the arguments for and against the doctrine, with his usual perspicuity, he concludes the subject by expressly saying that there is no valid objection to the possibility of superfœtation occurring while yet the ovum has not become considerably developed. These are his words: —"Nihil ergo repugnat quo tempore ovum nondum prægrande est, quin nova placenta ad aliam sedem uteri se adaptet, novusque eo loco fœtus subnascatur."

2. *Formation of the decidua uteri.* — John Hunter demonstrated the formation of a deciduous membrane lining the uterus, as one of the earliest consequences of conception. The existence of such a membrane has been urged by Roose and others, as fatal to the hypothesis of superfœtation.

And are all our facts and instances to fall at once before this membrane? Is the growth of the decidua so invariable, and when present is it so well developed and firm as always to resist the impulse of generation? Experience is clearly one way, while theory is the other. Nor can that theory be urged now with the same force that it once was: its supporters imagained that the decidua, in lining the uterus, covered over the apertures of the fallopian tubes. That part of their doctrine proves to be untrue; the decidua does not close the fallopian orifices, and any resistance which it can afford to a second conception must be over the cervix uteri; and recollect that the os uteri is not necessarily closed. That a certain degree of resistance (perhaps even a considerable degree) is exerted by this membrane, we are by no means disposed to deny; it may indeed be owing to this that superfœtations are not more frequent: but because the occurrence may thus be rendered impossible in many cases, does it therefore follow that it is so in all?

In a valuable paper communicated to the Medico-Chirurgical Society, by Dr. Robert Lee, the objection just referred to is revived. The case on which the paper is founded is that of a woman who died of peritonitis, eight days after parturition, and who proved, on examination of her body, to have had a double, or rather bifid, or bicorned, uterus. Here is the appearance of the uterus, as displayed by Dr. Lee. The right cornu had contained the fœtus (and, by the way, the deceased had borne several living children previously); the left was about the ordinary size of the unimpregnated uterus. This latter cornu was lined with a deciduous membrane, forming a shut sac towards the cervix, but it is remarkable that the fallopian tube was not closed, the membrane passing into the opening and leaving it completely pervious.

The discovery of a deciduous membrane in the unimpregnated cornu, appears to Dr. Lee to be of much importance. He thinks it probable that a decidua is similarly formed in every case of double uterus where either of the cornua is impregnated, and he adduces the instance of what occurs in the lower animals, "the membrane which surrounds the product of conception invariably occupying the

FIG. 22.—*Double or Bifid Uterus.*

a, The cervix; *b*, Orifice of the fallopian tube; *c*, Left cornu, lined with decidua; *d*, Right cornu, which had recently contained a fœtus.

whole inner surface of both cornua." Hence he argues the impossibility of superfœtation, even in cases which would seem most favourable to it—namely, where the uterus is bifid. "The disposition of the deciduous membrane," says he, "in the case I have now related, must have rendered superfœtation, or the conception of a second embryo during gestation, impossible; and its history tends entirely to overturn the recent speculations of M. Cassan also, on the possibility of superfœtation where a double uterus exists. Menstruation must have been equally impossible in this case as in ordinary pregnancy, where the inner surface of the uterus is lined with decidua *."

I must confess, that notwithstanding these very imposing statements, it still appears to me that the proof of Dr. Lee's position is by no means made out. We have here but a single case, and notwithstanding the analogy from the lower animals by which it is backed, further examples will be required in the human species before a general conclusion can be drawn. Should it happen, too, that such a structure is found general, it must still be admitted that it may not be equally perfect in all cases; for theory must be subservient to facts, not facts to theory.

It may be added, that perhaps this case no more disproves the possibility of superfœtation, than it does the fact of menstruation during pregnancy. Dr. Lee says that menstruation was "equally impossible" with superfœtation in this case. Now, as it is generally admitted by some of the most experienced accoucheurs that menstruation may, and often does, occur, at least once or twice, after conception, so I am inclined to infer that, in all pregnant women, the decidua is not to be found exactly as in the case just described.

* MEDICAL GAZETTE, vol. xi. p. 176.

But if the existence of such a decidua as Dr. Lee found over the cervix be admitted as an argument against superfœtation, another point which he noticed in the same case seems strongly in favour of it—namely, the open state of the fallopian tube. Had this been closed, it were then, indeed, perhaps impossible that superfœtation should take place; but being open, what insuperable obstacle can there be to the generative influence finding its way to the ovary, and thus effecting a new conception? Only allow that the first ovum does not completely fill the uterus, and that there is still access to one of the ovaries through a fallopian tube, and there can be no great hazard in supposing that even if there were a decidua uteri forming a shut sac, it would not in all cases present an unimpregnable barrier.

The learned Sir Thomas Browne makes some remarks on the subject, which I shall take leave to quote, not exactly through deference for his physiology, but for his comprehensive and sound understanding. It will be observed in the outset, that he is of the number of those who believe the womb closed upon the occurrence of conception; he does not, however, consider that this decides the impossibility of superfœtation. "Although it be true that upon conception the inward orifice of the matrix exactly closeth, so that it commonly admitteth nothing after, yet falleth it out sometimes, that in the act of coition the avidity of that part dilateth itself, and receiveth a second burden; which, if it happen to be near in time unto the first, they do commonly both proceed unto perfection, and have legitimate exclusions, periodically succeeding each other. But if the superfœtation be made with considerable intermission, the latter most commonly proves abortive; for the first being confirmed, engrosseth the aliment from the other. However, therefore, the project of Julia seem very plausible, and that way infallible, when she received not her passengers before she had taken in her lading, yet was there a fallibility therein; nor, indeed, any absolute security in the policy of adultery after conception. For the matrix (which some have called another animal within us, and which is not subjected unto the law of our will), after reception of its proper tenant, may yet receive a strange and spurious inmate, as is confirmed by many examples in Pliny, by Larissæa in Hippocrates, and that merry one in Plautus, urged also by Aristotle.*"

Superfœtation during extra uterine pregnancy.—There is another condition in which superfœtation may occur, namely, where the product of the first conception is extra-uterine. I have already noticed a remarkable instance in which a woman bore two or three children successively, while she had a fœtus in one of the fallopian tubes. Another example may be mentioned. During the existence of extra-uterine pregnancy a woman conceived again, and in due time was delivered of a mature infant. It became necessary, in consequence of some accidents which supervened, to give issue to the retained fœtus: gastrotomy was practised, when an infant was extracted which had been viable, but was now partially decomposed through its long sojourn in the abdomen. The patient recovered.

Another instance may be quoted. Dr. Cliet, of Lyons, in the year 1818, opened the body of a woman who had recently died. Behind the uterus, and a little to the right, he found a fœtus weighing five ounces, three drachms, and measuring eight inches and a half long. It had attained the fifth month of development. In the uterus was a second fœtus, of about the third month.

Superfœtation with a double uterus.—In M. Cassan's thesis (On Double Uterus and Superfœtation, Paris, 1826), there is the history of a case which occurred in the celebrated Mde. Boivin's practice. On the 15th of March, 1810, a woman, aged forty, gave birth to a female infant weighing about four pounds. As the abdomen still remained bulky, Mde. Boivin introduced her hand, but could find nothing in the uterus. Further examination led her to suspect that there was another fœtus, either extra-uterine or contained in a second cavity of the womb. At length, on the 12th May, a second female infant was born, weighing not more than about 3 lbs., feeble, and scarcely able to respire. The mother assured Mde. Boivin that she had had no connexion with her husband (from whom she was for some time separated) except thrice in two months, namely, on the 15th and 20th July, 1809, and the 16th September following. The product of the second conception was here perfectly distinct and separate from the first; and the uterus was bilocular.

This is, I believe, the only authentic example on record of superfœtation taking place in a double uterus, although such a structure is generally admitted to be adapted for such an occurrence. Nor indeed are twin cases common in bilocular uteri: when women with this form of womb become pregnant, they generally bear but one fœtus, as in Dr. Lee's case, a case described by Tiedemann in Meckel's *Archiv* for 1819, and one by Osiander, in which both the uterus and vagina were

* Inquiries into Vulgar and Common Errors, p. 118. Ed. 1686.

completely divided. But there is at least one instance on record of double pregnancy in a double uterus, — in Rust's *Magasin*, Band. xxvii. H. 1. Whether it was a case of superfœtation or not, seems uncertain; but one of the fœtuses, that in the right cavity, was larger than the other: the infant from the left side died on coming into the world.

General conclusions.

The following general conclusions seem to be warranted by what has been already said. Superfœtation is possible,—

1. When sexual intercourse is repeated *soon* after conception: in this way only can we account for distinct varieties, or different races, produced at one birth—such as white or black, and mulatto children.

2. When the product of the first conception is extra-uterine, or the womb partially occupied by a mole, or a dead or disorganized fœtus.

3. When the uterus is double; for, notwithstanding the theory of a decidua, which would seem to preclude such an inference, facts just referred to cannot be disputed. Where the uterus is perfectly bilocular, and no morbid condition interferes, it is difficult even theoretically to assign a plausible reason against the doctrine.

4. In every case where the uterus is not closed (and the closure, as we have seen, is not general), and where the product of the first conception does not, by its considerable size and the space it occupies in the womb, obstruct all access to one of the fallopian tubes, we cannot but admit the possibility.

5. And lastly, it is unavoidable to admit the fact of superfœtation, when we see lively and mature infants born of the same woman at an interval of three, four, five, or six months between the births. The limit of the interval between successive conceptions during pregnancy is uncertain: Weber hesitates not to extend it to the seventh month; nor does Haller dissent from his opinion.

In the preceding discussion I have avoided any appeal to authorities in the shape of an *argumentum ad verecundiam*, partly because I thought that a reference to facts would be far more profitable, but chiefly because the said authorities have been much divided. In conclusion, however, I need not hesitate to mention that if Hebenstreit, Ludwig, Metzger, Roose, Schmidtmüller, and Blumenbach, be opposed to the doctrine, there are, on the other side, the names of Haller, Harvey, Alberti, Teichmeyer, Ploucquet, Bernt, Henke, Mende, Martini, and most of the modern French school.

Orfila's opinion (in which Devergie coincides) is guarded in the extreme. I shall quote it, not because I approve of the cautious timidity with which it is expressed, but because, as it seems wrung from the author, it may possibly be entitled to the credit of being the better weighed. After reviewing most of the well-attested cases he could find on the subject, he sums up to this effect, "that the medical jurist ought to admit the possibility of superfœtation, but he ought at the same time to recollect, that cases occur in which it is extremely difficult to prove that it has taken place, the additional children being readily accounted for either as abortions or twins."

LECTURES

ON

MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LV.

In this lecture I propose to examine the family

POLYGONACEÆ,

the most important officinal substance obtained from which, is rhubarb; the produce of some species of

Rheum.

History.—Dioscorides speaks of a root which he calls *Rha*, or *Rheon* (ῥὰ ῥῆον), and which has been regarded by some as identical with our rhubarb; but the description he has given of it does not apply to the latter substance, and it is, therefore, fair to presume some other root must have been meant. "*Rha*, by some called *Rheon*, by the Latins *Rhaponticum*, grows," says Dioscorides, "in those countries which are beyond the Bosphorus, and from which it is brought. It is a black root, similar to great century, but smaller and redder, spongy, somewhat smooth, and odourless." Pliny gives a similar account of it, under the name of *Rhacoma:* it comes, he says, from the countries beyond Pontus, resembles the black costus, is odourless, and has a hot astringent taste.

Prosper Alpinus was of opinion that the *Rha* of Dioscorides was the root of Rheum Rhaponticum, which Alpinus obtained from Thracia in 1608, A.D. and cultivated at Pavia.

The later Greek writers are supposed to have been acquainted with our rhubarb. Freind says Alexander of Tralles, first mentioned it in weakness of the liver and dysentery. Paulus Ægineta seems to make a distinction between *Rha* and *Rheon*. In the first chapter of the first book of his work, he says, that, for the crudities and vomiting of pregnant women, we may give "the blood-wort, boiled in water, for drink; and likewise dill, and the *Pontic root, called Rha, in the dialect of that country.*" In the forty-third chapter of the same book, in noticing the practice of the ancients, he says, "Alvine discharges they promoted by giving turpentine to the extent of an olive, when going to rest; or, when they wished to *purge* more effectually, by adding a little *rhubarb* (*Rheon*)." This is the first notice of the purgative properties of rhubarb.

In one of the Arabian authors (Mesue, the younger), we find three kinds of rhubarb mentioned: the Indian, said to be the best, the Barbarian, and the Turkish, which is the worst of all.

Botanical history.—It may not be out of place here, to offer a slight sketch of the opinions of naturalists regarding the plant which furnishes our rhubarb. For a fuller account, I must refer those interested in this inquiry to the late Dr. Duncan junior's Supplement to the Edinburgh New Dispensatory.

Formerly this root was supposed to be obtained from the *Rheum Rhaponticum*. In 1732, the *R. undulatum* was sent from Russia to the Jussieus at Paris, and to Rand of Chelsea, as the true rhubarb. This is the species which Linnæus described as *R. Rhabarbarum*. About 1750, at the desire of Kauw Boerhaave, first physician to the Emperor of Russia, the senate commissioned a Tartarian merchant, a dealer in rhubarb, to procure them some seeds of the genuine plant. This he did, or pretended to do; and on sowing them, two species of Rheum were obtained—namely, the *undulatum* and the *palmatum*. In 1762, seeds of the latter species were received by Dr. Hope, of Edinburgh, from Dr. Mounsey, at Petersburgh; they were sown, and the plants cultivated with success. The root of this species being found to agree, in many of its characters, with that of genuine rhubarb, led to the belief that the palmatum was the true species. The inquiries of Pallas, however, raised some doubts about the correctness of this opinion; for the Bucharians declared themselves unacquainted with the leaves of the palmatum, and described the true plant as having round leaves, with a few incisions only at the margin. This description agreed best with *Rheum compactum*, the roots of which were declared, by Millar, who cultivated the plant, to be as good as foreign rhubarb. Georgi relates, that a Cossack pointed out to him the leaves of the R. undulatum as the true species. These accounts were not satisfactory to the Russians, and in consequence, in 1790, Sievers, an apothecary, went to Siberia, under the auspices of Catherine II., with a view of settling the question; but after four years of persevering attempts to reach the country where the true rhubarb grew, or even to obtain the seeds, he was obliged to be satisfied with negative results only. "My travels," says he, "as well as my acquaintance with the Bucharians, have satisfied me that as yet nobody—that is, no scientific person—has seen the true rhubarb plant. All that is said of it by the Jesuits, is miserable confused stuff; all the seeds procured under the name of true rhubarb are false; all the plantations, from those of the Knight Murray down to the flower-pot of a private individual, will never yield true rhubarb. Until further determination, I hereby declare all the descriptions in all the Materia Medicas to be incorrect." The inflated style of this person, does not, however, increase our confidence in his statements.

Four species of Rheum, growing on the Himalayan Mountains, have been described by my friends, Dr. Wallich and Mr. Royle. Of these, one (namely, the *Rheum Emodi*, called also *R. australe*) was at first supposed to be one of the sources of our officinal rhubarb, though without sufficient reason. I have specimens of the Himalayan rhubarb collected and dried by the natives, and which were given me by Dr. Wallich: they are probably the produce of *R. Emodi*, or *Webbianum*, and have hardly any resemblance to the rhubarb of the shops.

Mr. Royle, in his "*Illustrations of the Botany of the Himalayan Mountains*," after referring to the accounts of different authors, as to the precise locality of the country yielding Russian rhubarb, concludes that it is "within 95° of E. long. in 35° of N. latitude—that is, in the heart of Tibet." And he adds, "as no naturalist has visited this part, and neither seeds nor plants have been obtained thence, it is as yet unknown what species yields this rhubarb."

Characters of the genus Rheum.—The genus Rheum is characterized by having hermaphrodite flowers, consisting of a coloured perianthium, composed of from six to nine pieces, arranged in two rows; nine stamina inserted on the torus at the base of the perianthium, free or subconnate at their base; a simple triangular ovarium, supporting three styles, which are each furnished with a peltato-capitate

stigma. The fruit is a three-sided caryopsis, winged at the angles, and surrounded at the base by the perianth; the seeds are albuminous, with a central straight embryo.

From this description it will be evident that the genus belongs to class *Enneandria*, order *Trigynia*, of the Linnæan arrangement.

The species hitherto known, agree in possessing large fleshy branching roots, which are brown externally, and yellow, intermixed with red, internally; radical and petiolated leaves; membranous ochreæ; and numerous small flowers, arranged in panicles or compound racemes.

The *Rheum palmatum*, fig. 147 (the species assumed, in the London Pharmacopœia, as the source of the rhubarb of the shops) is distinguished from other species by the palmated form of its leaves; the clefts between the segments being somewhat dilated, the laciniæ acuminate. On their upper surface the leaves are roughish, and of a dull-green colour; on their under surface, they are pale and villous. The petioles are slightly furrowed above, and are rounded at the edges. This species grows wild on the mountains of Chinese Tartary, and in Tibet. It is cultivated both in England and Scotland, for the root; which, when dried and properly prepared, constitutes the "*English rhubarb*" of our druggists.

Fig. 147.—*Rheum palmatum.*

Fig. 148.—*Rheum compactum.*

Rheum compactum (fig. 148) has very obtuse, shining, smooth leaves, somewhat lobed, with small teeth. It is a native of Tartary and China.

Rheum australe or *Emodi* (fig. 149) has roundish, cordate, obtuse leaves, rough beneath and on the margin, with the sinus at the base dilated, and with furrowed roundish footstalks. The branches and peduncles are papillose—scabrous; the leaflets of the perianth oval oblong, finely crenate at the apex. It grows in Chinese Tartary and in the Himalayas.

Fig. 149.—*Rheum Emodi or australe.*

Preparation.—We are yet in want of a good account of the method followed in preparing Asiatic rhubarb for the market. It is probable, however, that the process varies in different places, since the accounts given by Bell and Sievers do not precisely agree. Bell says, that after digging and gathering the rhubarb, the Mongalls cut the large into small pieces, in order to make them dry more readily, and make a hole in the middle of every piece, through which a cord is drawn, in order to suspend them in any convenient place. They hang them for the most part about their tents, and sometimes on the horns of their sheep. Sievers, however, states, that the roots are cut in pieces, strung upon threads, and dried under sheds so as to exclude the solar rays; and the same author tells us that sometimes a year

elapses from the time of its collection until it is ready for exportation.

Physical properties and varieties.—In English commerce four kinds of rhubarb are known, namely, *Russian*, *East Indian* or *Chinese*, *Dutch—trimmed*, and *English*.

1. *Russian rhubarb.*—This is the kind known in the shops by the name of *Turkey rhubarb*, because it is said to have been brought formerly to this country by way of Natolia. It is now imported from Petersburgh. It is described in books by the names of *Muscovite*, *Bucharian*, or *Siberian* rhubarb.

According to the treaty entered into by the Russians and Chinese, all the commerce between the two nations is transacted at the frontiers. Kiachta is the Russian, Maimatschin the Chinese frontier town. All the so-called Russian rhubarb is brought to Kiachta by Bucharian merchants, who have entered into a contract to supply the government with that drug in exchange for furs. It is there examined with much care in the presence of the Bucharians, by the apothecary stationed at Kiachta for the purpose. The worm-eaten pieces are rejected, the others bored to ascertain their soundness, and all the damaged or decayed parts are cut away. In accordance with the terms of the contract, the pieces which do not pass examination are burned; the remainder is then transmitted to Petersburgh, and from thence to us.

It is imported in boxes or cases, covered with a pitched cloth, on the outside of which is a hide. The size of the pieces are various; but in commerce the small pieces are preferred, and they are, therefore, picked out and sold as *radix rhei turcici electa*,—the larger pieces and the dust being employed for powdering. Their shapes are various, being angular, rounded, irregular, &c. The external appearance of many of the pieces seems to show that the cortical portion of the root had been shaved off longitudinally by successive strokes of a knife: hence the angular appearance of the external surface. Holes are observed in many of the pieces: some of them extend completely, others only partially through. Those which extend only to the centre of the pieces have been evidently made for the purpose of examining the condition of the interior of the rhubarb.

Externally the pieces are covered with a bright yellow coloured powder, usually said to be produced by the mutual friction of the pieces in the chests during their passage to this country, though many druggists believe it is derived from the process of *rouncing* (that is, shaking in a bag with powdered rhubarb), before its exportation. The odour is strong and peculiar, but somewhat aromatic: it is considered by druggists to be so delicate that in all wholesale houses a pair of gloves is kept in the Russian rhubarb drawer, with which only are the assistants permitted to handle the pieces. When chewed it feels gritty under the teeth, from the presence of numerous crystals of oxalate of lime; it communicates a bright yellow colour to the saliva, and has a bitter, slightly astringent taste.

Beneath the dust with which the pieces are covered, the surface has a reddish white tint, owing to the intermixture of white and red parts. The yellowish white parts have the form of lines or veins, which, by their union with each other, assume a reticular form. Irregularly scattered over the surface we observe small star-like spots and depressions, of a darker colour. The transverse fracture is uneven, and presents numerous brownish red or dark carmine coloured undulating veins. The longitudinal fracture is still more uneven, and shows the longitudinal direction of the veins, which are often interrupted with white. The surface obtained by cutting is more or less yellow, and often exposes the veins, disposed in groups.

By boiling very thin slices of the root in water, and then submitting them to the microscope, we observe cellular tissue, annular ducts, and numerous clumps of crystals of oxalate of lime (fig. 150). Turpin considered the presence of these crystals sufficient to distinguish Russian and Chinese rhubarb from that grown in Europe; but in some specimens of English rhubarb I have met with these crystals in as great abundance as in foreign rhubarb. According to Raspail, these crystals exist in the interstices of the elongated cellular tissue.

Fig. 150.—*Crystals of Oxalate of Lime in Russian Rhubarb.*

The powder of Russian rhubarb is of a bright yellow colour, with a reddish tint; but as met with in the shops, it is almost invariably mixed with the powder of English rhubarb.

According to Hornemann, Russian rhubarb is composed of—

Rhabarbarin of Pfaff	16·042
Yellow colouring matter of Henry	9·583
Bitter astringent extract	14·687
Oxydized tannin	1·458
Mucilage	10·000
Matter extracted from the fibre by potash ley	28·333
Oxalic acid contained in the potash ley	1·042
Insoluble residue	14·583
Loss in drying the root	3·333
Loss in the analysis	0·939
	100·000

70 grains of the insoluble residue obtained from 1 ounce of Russian rhubarb, gave 33 grains of ashes, composed of a trace of potash, 1 grain carbon, 2 grains silicie acid, 1 grain carbonate of magnesia, 1 grain alumina with a trace of oxide of iron, and 28 grains of carbonate of lime.

White or *Imperial rhubarb.*—When Pallas was at Kiachta, the Buchanarian merchant who supplied the crown with rhubarb brought some pieces of white rhubarb, which had a sweet taste, and was equal in its effects to the best sorts. It is said to be the produce of *Rheum Leucorhizon* of Pallas (the *R. nanum* of Sievers). A good account of it, with coloured figures, will be found in the "*Pharmaceutische Waarenkunde*" of Gœbel and Kunze. Some of the specimens of Russian rhubarb brought to this country have a much whiter appearance than is usually observed.

2. *China or East Indian rhubarb.*—The rhubarb known in commerce by the name of East Indian, or Chinese, is brought to this country either directly from Canton, or indirectly by Singapore, and other parts of the East Indies. It is imported in chests of thin wood, lined with lead. The pieces are frequently cylindrical or roundish, but sometimes flattened; in trade they are distinguished as *rounds* and *flats*. They appear to have undergone a different process of preparation to that of Russian rhubarb. Thus the cortical portion of the root seems rather to have been scraped than sliced off, and hence the surface is not so angular; and on the worst pieces we observe the remains of the greenish-brown or blackish cortex. Among druggists this kind of rhubarb is frequently termed *half-trimmed*, or *untrimmed rhubarb*. The pieces are generally perforated with holes, in many of which we find portions of the cords by which the pieces were suspended. These holes are smaller than those observed in Russian rhubarb, and that portion of the root forming their sides is usually dark-coloured, decayed, and of inferior quality. The best pieces of this sort of rhubarb are heavier and more compact than than those of the Russian kind; they are covered with an easily separable yellow dust. When this is removed we observe that the surface is not so regularly reticulated, is more of a yellowish-brown than reddish-white colour, and has coarser fibres than Russian rhubarb. On the finer pieces we notice numerous star-like spots or depressions. The fracture is uneven; the veins, especially towards the middle, have a less determinate direction, and are of a duller or reddish-brown, and, in very bad pieces, of an umber-brown colour, with a grey substance between the veins.

The odour of this species is much less powerful than that of Russian rhubarb, and is somewhat less aromatic. The taste, grittiness when chewed, and microscopic appearances, are similar to those of Russian rhubarb. The colour of the powder is of a more dull yellow or brownish cast.

Hornemann analysed this species of rhubarb under the name of English rhubarb. Its constituents were as follows:—

Rhabarbarin of Pfaff	14·375
Yellow colouring matter of Henry	9·166
Bitter astringent extract	16·458
Oxydized tannin	1·249
Mucilage	8·333
Matter extracted from the fibre by potash ley	30·416
Oxalic acid contained in the potash ley	0·833
Insoluble residue	15·416
Loss in drying the root	3·125
Loss in the analysis	0·629
	100·000

Seventy-four grains of the insoluble residuum obtained from one ounce of Chinese rhubarb gave 39 grains of ashes, composed of a trace of potash, 1 grain carbon, 2 grains silicic acid, 1 grain carbonate magnesia, 1 grain alumina with a trace of iron, 34 grains carbonate lime.

3. *Dutch-trimmed rhubarb.*—In English commerce there is met with a kind of rhubarb known by the name of *Dutch-trimmed* or *Batavian*, and which is brought from Canton and Singapore. It is well known to druggists, and is always quoted in price-currents as a distinct kind. It is not improbable that it is the kind described by Guibourt and others under the name of *Persian rhubarb*. It is imported in chests, each containing from 130 to 140 pounds. In shape, size, and general appear-

ance, it resembles the Russian kind; for the cortical portion of the root seems to have been separated by slicing, and hence the pieces have the same angular appearance on the surface that the Russian rhubarb has. The pieces are frequently perforated, and in the holes are found the remains of the cord by which the root has been suspended. In the drug trade this kind of rhubarb is said to be *trimmed*, and according to the shape of the pieces they are called *flats* or *rounds*. The colour and weight of the pieces are variable.

4. *Himalayan rhubarb.*—As already mentioned, it is probably the produce of *R. Emodi* and *Webbianum*. It has very little resemblance to the rhubarb of the shops. The pieces which I have, were procured by Dr. Wallich from the natives, who had strung them around the necks of their mules. The pieces are cylindrical, and are cut obliquely at the extremities; the cortex of the root is not removed; the colour is dark brown, with a slight tint of yellow; they are without odour, and have a course fibrous texture. Mr. Royle says that the Himalayan rhubarb makes its way into the plains of India through Kalsæ, Almora, and Butan: it has, he says, a spongy texture, and sells for only one-tenth of the price of the best rhubarb, resembling in quality the Russian, and which is found in India.

5. *English rhubarb.*—Two kinds of rhubarb are met with in the shops under the name of English rhubarb: one is *dressed*, or *trimmed*, so as to resemble the Russian kind, and is, I believe, the produce of Rheum palmatum; the other is sometimes called *stick* rhubarb, and is said by Stephenson and Churchill to be obtained from Rheum undulatum, though, in the drug trade it is believed to be procured from the young roots of the same species as that yielding the dressed rhubarb.

The *dressed English rhubarb* is the produce of Banbury in Oxfordshire. It is the kind frequently observed in the show bottles of druggists' windows, and is sold in some of the streets of London (particularly Cheapside and the Poultry) for "*Turkey rhubarb*," by persons dressed up as Turks. It occurs in various sized and shaped pieces, which are trimmed and frequently perforated, so as to represent Russian rhubarb; some of the pieces are cylindrical in their form, and are evidently segments of cylinders; others are flat. This kind of rhubarb is very light, spongy (especially in the middle of the pieces), attractive of moisture, pasty under the pestle, and has a reddish or pinkish hue not observed in the Asiatic kinds. Internally it has usually a marbled appearance: the streaks are pinkish, parallel, and have a radiated disposition; and in the centre of some of the larger pieces the texture is soft and woolly, and may be easily indented by the nail. Its taste is astringent and very mucilaginous; it is not at all, or only very slightly, gritty under the teeth; its odour is feeble, and more unpleasant than either the Russian or East Indian kinds. The microscope discovers in it, for the most part, very few crystals of oxalate of lime.

The *common stick English rhubarb* occurs in angular or roundish pieces, of about five or six inches long, and an inch thick. When fractured it presents the radiated appearance, and the red-coloured streaks, of the kind last mentioned. Its taste is astringent, but very mucilaginous; it is not gritty under the teeth; it breaks very short.

English rhubarb is extensively employed by druggists to adulterate the powder of Asiatic rhubarb.

6. *French rhubarb.*—Rhubarb is procured in France from three species of Rheum, namely, Rhaponticum, undulatum, and especially compactum. These plants are cultivated in an establishment, at a place called (in consequence) *Rheumpole*, at a little distance from Loriant, in the department of Morbihan. The cultivation of R. palmatum has been abandoned.

I am indebted to Professor Guibourt for two varieties of French rhubarb, the one which he terms *flat*, the other *round*: the first is probably the produce of R. Rhaponticum, the second of R. compactum.

Hornemann has analysed a rhubarb which he terms R. Rhaponticum. It was either French or English rhubarb (Geiger says the latter.) The constituents he found were:—

Rhabarbarin (of Pfaff)	10·156
Yellow colouring matter (of Henry)	2·187
Bitter astringent extract	10·416
Oxydized tannin	0·833
Mucilage	3·542
Matter extracted from the fibre by potash ley	40·208
Insoluble residuum	8·542
Lost in the drying of the root	6·043
Loss in the analysis	1·447
Rhaponticin	1·043
Starch	14·583
	100·000

The insoluble residue yielded only one-tenth of its weight of ashes, composed of potash, lime, magnesia, and alumina.

The difference between this and the preceding analyses consists in the presence of rhaponticin and starch, in the absence of oxalic acid, and in the small quantity of ashes yielded by the insoluble residuum.

Chemistry of rhubarb.—Notwithstanding the numerous experiments to which rhubarb has been subjected by some very eminent chemists, our knowledge of its constituents is still exceedingly imperfect. The most important analyses of it which have been made are those of Schrader, Henry, Brande, Hornemann, and Peretti, while some valuable information has been obtained from the researches of Pfaff, Trommsdorf, Henderson, Vaudin, Meissner, Runge, Nani, Caventou, Carpenter, and others.

Some of these chemists have employed the term *rhabarbarin* to indicate a supposed peculiar principle in rhubarb; but unfortunately this term has been applied by different experimenters to different substances, so that great confusion has been thereby produced. Thus the *rhabarbarin of Pfaff* is the alcoholic extract of rhubarb, prepared by digesting the watery extract of rhubarb in rectified spirit of wine. As might be expected from its mode of preparation, it is a mixture of various proximate principles; according to Hornemann, of incrystallizable sugar mixed with a calcareous salt, extractive, resin, semi-resin, and gallic acid. The same authority also tells us that the *rhabarbarin of Henry* (called by some *caphopicrite*) consists of a peculiar substance, similar to fat, or oil, (*rheumin*) infusible in boiling water, and which is reddened by an alkali; of resin, and tannin. The *rhabarbarin of Caventou* is a crystallizable yellow colouring matter. These examples (which might be multiplied) are sufficient to show the confusion existing among authors, in the use of this term.

In speaking of the varieties of rhubarb, I have quoted three analyses made by Hornemann. It may not be amiss to subjoin Henry's analysis of China rhubarb.

Peculiar yellow colouring matter (*rhubarbarin*).
Fixed oil.
Supermalate lime.
Gum (small quantity).
Amylaceous matter.
Oxalate of lime (one-third of the weight of the root).
Potash salt (a small quantity).
Sulphate lime (a small quantity).
Oxide of iron.
Lignin.

1. *Odorous matter of rhubarb.*—On what principle does the odour of rhubarb depend? Guibourt says that the taste, colour, and odour, depend on one principle,—namely, the rhabarbarin of Henry; which statement, however, is not very probable, since the colour and odour of this root bear no proportion to each other in the different varieties. By many, the presence of a volatile oil has been suspected. Indeed Bressy, a physician at Arpajon, announced to the *Académie de Médecine*, that he had obtained it, but the commissaries appointed to repeat his experiments were unable to verify his statements.

2. *Colouring matter of rhubarb.*—The colouring matter of rhubarb is extracted both by water and alcohol. Its tint is not precisely the same in all the varieties of rhubarb, being pinker in some than in others. Alkalies (potash, soda, and ammonia) give it a red colour; and on the addition of an acid the original tint is restored, and a precipitate produced. Lime-water reddens and precipitates it. The acids (acetic excepted) precipitate it from its solutions. Various metallic solutions (as the acetate of lead, protochloride of tin, protonitrate of mercury, and the nitrate of silver), also precipitate it. It is partially volatilized by heat: thus, if powdered rhubarb be heated in a capsule over a spirit-lamp, an odorous yellow vapour is obtained, which communicates a red colour to a solution of caustic potash. Mr. Faraday has observed that solutions of boracic acid, and also of the borates made purposely acid, redden turmeric; but do not affect paper stained with rhubarb. Geiger has proposed this as a means of distinguishing rhubarb which had been dyed by means of turmeric; a fraud, I believe, not practised in this country.

3. *Astringent matter of rhubarb.*—In several analyses of rhubarb, tannin (tannic acid) is mentioned as one of the constituents. The chemical evidence of its presence is the action of the ferruginous salts and of gelatine on the infusion of rhubarb. Thus the perchloride and persulphate of iron strike a green colour with the infusion of this root; while a solution of gelatine occasions a copious yellowish precipitate, which is dissolved on the application of heat, or by the addition of an excess of gelatine. These effects, however, have been said to depend on the action of the tests just mentioned, on the *rhabarbarin of Henry*; but that tannic acid is really present seems to be highly probable from the astringent taste of the root, and from the large quantity of this acid found in other plants of this family, as in Coccoloba uvifera, and Polygonum Bistorta. Moreover, the vegetable alkaline salts (as sulphate of quinia) produce a precipitate with the infusion of rhubarb, an effect which they also produce with solutions of tannic acid. If, indeed, rhubarb do not contain this acid, we have yet to learn the real characteristics of tannin. The red veins are the seat of this presumed acid, as is shewn by brushing the cut surface of a piece of rhubarb with a weak solution of iron: the change of colour occurs at these parts only.

4. *Purgative principle of rhubarb.* — The purgative property of rhubarb has been successively ascribed to extractive, to resin, to the colouring matter, and to a peculiar vegetable alkali. Further evidence, however, is required before we can admit any one of these statements. The phenomena of the action of iodine on an infusion of rhubarb, presently to be mentioned, are certainly in favour of the presence of a basic principle. Whatever may be its precise chemical nature, it seems, as met with in rhubarb, to be soluble in water, alcohol, and æther, since all these liquids acquire purgative properties by digestion with this root.

5. *Fixed oil.*—A bland fixed oil, in very small quantity, is said to exist in rhubarb. It becomes rancid by heat, and is soluble in both alcohol and æther.

6. *Gum—Starch—Sugar.* — Gum, starch, and, according to Meissner, sugar, exist in rhubarb. If a solution of iodine, or of iodureted iodide of potassium, be added to a decoction of Russian, East Indian, or Dutch-trimmed rhubarb, a greenish-blue colour is immediately produced. After a little time this colour disappears, the original tint of the decoction returning; and no free iodine can be detected by the addition of starch. Hence it would appear that the iodine must enter into some new combination with a basic substance, forming probably an iodide, and perhaps also an iodate. This is apparently proved by the fact, that the addition of nitric acid restores the greenish-blue tinge of the solution.

If a solution of iodine be added to an infusion of English rhubarb, an intense blue iodide of starch is formed, which does not totally disappear by standing; so that it would appear there is less of the basic substance in this variety than in the Russian and Chinese kinds.

Geiger says that the tincture of iodine produces, with the powder of Russian rhubarb a dark green colour; with that of Chinese rhubarb a brown (not a dark green, except in a few instances); with that of English rhubarb a dark-green, as in the Russian kind; with that of French rhubarb a blue. I have several times repeated these experiments, but have never been able to obtain the above-mentioned distinction between the Russian and Chinese kinds.

7. *Oxalate of lime.*—The large quantity of oxalate of lime found in Asiatic rhubarb is a remarkable circumstance. It exists in the white veins of the root, and, as already mentioned, according to Raspail, is formed in the interstices of the elongated cells. The crystals of this salt may be recognised by the grittiness of rhubarb when chewed, by a microscopic examination of boiled films of the root, or by rubbing these films between two plates of glass. By incinerating rhubarb root the oxalate is decomposed, and converted into carbonate of lime. Chinese is said to contain more of the oxalate than the East Indian rhubarb, though the quantity varies in different specimens of each kind. For the most part English rhubarb contains but little of this salt, though I have occasionally met with specimens possessing it in abundance. In the laboratory we are unable to produce this salt in a crystallized form; in plants, however, it is very common in this state. Its crystallization is here probably produced by the slowness with which its constituents are allowed to come together.

I do not think it necessary to individualize the other constituents of rhubarb.

Physiological effects: (*a.*) *In small doses.*—Taken in small doses, as from four to eight grains, rhubarb acts as an astringent tonic, its action as such being principally or wholly confined to the digestive organs: thus in debilitated conditions of these parts it promotes the appetite, assists the digestive process, and improves the condition of the mucous secretions. (*b.*) *In larger doses*, as from a scruple to a drachm, it operates as a purgative, slowly and mildly, though sometimes with a little griping. It never inflames the mucous membrane of the alimentary canal, as jalap, scammony, colocynth, and other drastic cathartics do. Constipation usually follows its purgative effect, and which is referred to its astringent principle; but the same effect is commonly observed after the employment of other purgatives. In febrile complaints and inflammatory diseases (as peripneumony), it is said to accelerate the pulse, and increase the heat of the body, and, therefore, in such cases, is considered objectionable.

Modus operandi.—The colouring and purgative principles of rhubarb become absorbed. Tiedemann and Gmelin found the colouring matter in the blood of the mesenteric, splenic, and portal veins of dogs, to whom this root had been administered. In the urine the colouring matter of rhubarb may frequently be detected by the high tint of this secretion, and by the red colour produced by the addition of potash, which would thereby distinguish the colouring matter of rhubarb from that of the bile. It does not appear, however, to affect the quantity of urine secreted.

That the purgative principle of rhubarb is also absorbed, is shewn by the purgative quality of the milk of nurses to whom this root has been administered.

Rhubarb has for a very long period been considered to possess a specific influence over the liver, to promote the secretion of bile, and to be useful in jaundice. Dr.

Cullen says, he cannot find any foundation for this opinion either in theory or practice. It seems to have arisen entirely from the absurd doctrine of signatures.

Observation does not support the opinion at one time entertained, that rhubarb acted as a tonic to the system generally.

Uses.—1. *As a purgative.* As an ordinary purgative, rhubarb is considered objectionable, on account of the constipation which follows its purgative effect It is well adapted, however, to those forms of diarrhœa in which some irritating matter is still contained in the bowels: it first evacuates this, and afterwards acts as an astringent. Dr. Cullen has justly observed, that "in many cases of diarrhœa no further evacuation than what is occasioned by the disease is necessary or proper, and, therefore, the vulgar practice of employing rhubarb in every case of this disease, appears to me to be very injudicious."

As an infant's purgative, rhubarb is deservedly celebrated. It is well adapted to a variety of complaints, but is especially serviceable in mesenteric affections, and in those cases accompanied by an enlarged belly.

Sulphate of potash is a very useful adjunct to rhubarb in cases of diarrhœa in adults. For children, rhubarb is usually combined with magnesia or chalk; and when the object is to promote the secretions generally and produce an alterative effect, the *hydrargyrum cum cretâ* is frequently conjoined.

2. *As a stomachic and tonic.* In those forms of dyspepsia depending on a debilitated condition of the digestive organs, rhubarb in small doses is given with great benefit.

3. *As a vermifuge.* It has also been employed against worms.

4. *External use.* Alibert has used rhubarb by way of friction, with saliva or with lard, on the abdomen Home used it to stimulate indolent ulcers.

Rumex Acetosa.

As the leaves of Rumex Acetosa are officinal substances, we must not pass over this plant, though it is very rarely employed in medicine.

Common sorrel is a well-known indigenous vegetable, belonging to class *Hexandria*, order *Trigynia* of the Linnean arrangement. Its flowers are diœcious, and are composed of a six-parted calyx, the sepals being permanent and tuberculated; six stamina; three reflexed styles, with three cut stigmas. The fruit is a nut, with three sharp angles: the embryo is on one side; the radicle superior. The leaves are oblong and arrow-shaped.

Sorrel leaves have an agreeable acid, slightly astringent taste, and contain the bin-oxalate of potash, tartaric acid, mucilage, and fecula: moreover, the green colour which the leaves produce with solutions of iron, shows the presence of tannic acid.

In some countries sorrel is eaten as a salad. It acts as a refrigerant and diuretic. A decoction of the leaves may be employed in the form of a whey, as a cooling and pleasant drink in febrile and inflammatory diseases. Laugier has suggested that the use of aliments containing oxalic acid, as sorrel, may, under some circumstances, give rise to the production of calculi of oxalate of lime.

Polygonum Bistorta.

Bistort (Bistorta,—*bis torta* twice twisted or wreathed) is an indigenous plant, belonging to the class *Oetandria*, order *Trigynia.*

Botany.—It is about a foot and a half high. Its root is large, tortuous, and very astringent; its stem is simple, bearing one cluster; the leaves are ovate, waved—the radicle ones tapering into a footstalk; flowers arranged in spiked clusters, and composed of a monophyllous, divided petaloid stigma; eight stamina, and three styles. The fruit is a triquetrous nut.

Properties. — The root is twice bent on itself; is rugous and brown externally, reddish internally, almost inodorous, and of an austere and strongly astringent taste. It is very rich in tannic acid, as is shown by the blueish-black precipitate with the ferruginous salts, and the tannate of gelatine formed with a solution of isinglass. This root contains also a considerable quantity of starch, and, according to Scheele, oxalate of lime.

Effects. — Its local action is that of a powerful astringent, depending on the tannic acid; its remote action is that of a tonic. The quantity of starch it contains renders it nutritive; and in Siberia it is employed as an aliment after having been roasted.

A decoction of bistort may be employed as an injection in leucorrhœa and gleet; as a gargle in spongy gums and relaxed sore throat; and as a lotion to ulcers attended with excessive discharge.

Internally it has been employed, combined with gentian, in intermittents. It may also be used in passive hæmorrhages and diarrhœa.

Coccoloba uvifera.

The *sea-side grape* is a middle-sized tree, growing in the West Indies, and belonging to the class *Octandria*, order *Monogynia* in the Linnean arrangement. Its bark is of an astringent nature, and from it is said to be obtained an extract at one time introduced into medicine as *Jamaica kino.*

ON THE

THEORY AND PRACTICE OF PERCUSSION

AS A

MODE OF DIAGNOSIS.

To the Editor of the Medical Gazette.

Sir,

In the last number of your journal there is a communication from my friend Dr. Clendinning, describing the results of certain experiments on percussion which he considers to be opposed to my views on that subject, as they are reported in the Lancet, from a communication I made some time since to the Westminster Medical Society. I have reason to believe that my ingenious friend will cease to differ with me when my views are placed before him in a clearer manner than that of the report in question; and as I venture to suppose that they may not be unacceptable to some of your readers, I solicit a few of your pages as the medium of communication. The text contains the substance of the observations which I made to the Westminster Medical Society, and in a note or two I will advert to the objections of Dr. Clendinning.—I am, sir,

Your obedient servant,

Chas. J. B. Williams.

Halfmoon-Street,
Jan. 9, 1837.

That class of physical signs which may be obtained by attending to the character of the sound which different parts or organs yield on being struck, might appear, at first consideration, so simple in their nature, and so obvious in their mode of production, as to need very little attention to enable us to understand them, and but slight experience to qualify us to practise them. But when the student first applies this knowledge to practice,—when he tries to elicit from the chest and abdomen the respective sounds that are described to characterize the different regions,—he is generally disappointed with the obscurity of the results. He sees the experienced auscultator exhibit striking contrasts of sound as illustrations of the phenomena, and he expects in his own attempts to obtain results as obvious and unequivocal. But he soon finds that there is much more in the manner of using percussion than he has been led to expect. It is a long lesson of experience, and there are very few who have patience and perseverance to learn it. The majority of those who do attempt it are content to go only so far as the results seem obvious and easily obtained, and leave a great number of cases but little elucidated by this method of diagnosis.

But the difficulties of percussion, and the anomalies of its results, do not occur only to students in the practice. Puzzling and deceptive cases sometimes present themselves to the most experienced; and Laennec himself was constrained to confess that he sometimes met with chests which sounded badly, although the parietes were thin, the respiration perfect,—and he could not assign a cause for the defective sound. The deficient resonance of the chest in certain cases of spasmodic asthma, was also to him a matter of obscurity.

The great aid which M. Piorry brought to the practice of percussion, in employing a *pleximeter* or *percussion-plate*, diminishes greatly the difficulties of percussion, by affording a uniformity and firmness of surface, which the natural parietes of the chest do not present; and this mediate percussion with a pleximeter, or what generally answers as well, with one or more fingers of the left hand, is the method now usually adopted. But even this improved method is not without its difficulties; and I continually find not only students, but practitioners experienced in the art, obtain different results on percussing the same subjects; nay, I have seen a very shrewd auscultator perplexed at finding the same spot of the chest at one moment give a dull sound, and at the next a pretty clear one, notwithstanding the *usual* precautions were taken to obtain a uniformity of result. The same difficulties having frequently occurred to myself, I was some time ago led to study the acoustic principle of percussion more fully than had hitherto been done; and I now proceed to state some of the views and practical conclusions to which this study has led me.

The deep or hollow sound which the surface of a healthy chest yields on being struck, has been in a general way vaguely referred to the air contained in the lungs within it. Laennec con-

tented himself with this view, without tracing more accurately the nature of the process. Piorry and Forbes, who have written since more fully on the subject of percussion, give rather the parallel phenomena of inanimate objects, than any exact analysis of the sounds in question. The latter writer, where he is more precise, seems to imply that the vibrations of the air diffused through the lung produce the sound so remarkable for its hollowness, and that liquid or solid effusions prevent this air from receiving these vibrations. We must complete the elements of this view before we can test its accordance with the phenomena observed.

It is well known that different bodies yield different sounds when struck; and it is supposed that as hollow bodies yield the loudest sound, this must proceed from the vibrations of the air within them. Solid bodies, and those containing liquids, on the other hand, give dull sounds, from being destitute of air. So, it is supposed, the chest will yield a sound loud in proportion to the quantity of air contained within it, this air being the most sonorous body. Now this view, which, as far as vague expressions can be interpreted, is the one generally received, I conceive to be opposed by the following considerations.

1. If the sound obtained on striking the chest depended on the vibrations of the air within, it should be deepened in tone by increasing the volume of that air, and raised by diminishing it; just as the note given by any hollow vessel when struck will be deep in proportion to the size of its interior*. Now changing the quantity of air in the chest by acts of respiration does not in this manner alter the sound of percussion: slight changes produce no difference; and a very full inspiration, instead of deepening the sound, actually raises its tone in a very perceptible degree.

2. If the sound of striking the chest originated in the air within it, it should be greatly changed by closing the glottis; for the sound given by a hollow vessel, or India rubber bottle with its mouth closed, is totally different from that which it yields with its mouth open. Now, provided no respiratory effort be at the same time made, striking the chest gives the same sound whether the glottis be shut or open.

3. The sonorous vibrations of air contained in cavities may be of two kinds. One depends on any impulse communicated to the mouth of the cavity, and resisted by the body of air within, acting in the manner of a bottle, or of a tube closed at one end. This requires that the cavity should communicate with the external air, which we have seen is not necessary to the pectoral sound. The second kind of sound produced in air-filled cavities, is that resulting from the successive reflections of any sonorous impulse from side to side of the cavity; which reflections becoming regular vibrations, constitute a sound of a determinate character. This constitutes the prolonged reverberations heard in empty casks, the tinkling echo of the interior of bottles, cups, &c., the phenomena of metallic tinkling and amphoric resonance heard in various smooth air-filled cavities of the animal body*. But this cannot constitute the sound of pectoral percussion; for in a cavity of the size of the chest, instead of being drum-like, it would be tinkling, as it actually is in pneumo-thorax. Further, the pulmonary tissue, as it prevents the transmission of the voice from the bronchi to the surface, except at points where these are quite superficial, so much more completely will it prevent the transmission and reflection of sonorous vibrations to-and-fro, across the whole interior of the chest.

The last argument will be, to those who are really familiar with the laws of acoustics, quite conclusive against the notion that the air in the chest is the seat of the sound elicited by percussion. There is, in truth, no air-filled cavity, but a heterogeneous sponge, eminently calculated to arrest the vibrations of air, and which does more or less completely intercept those of the voice from being transmitted to the parietes of the chest. To consider the air in the lungs to be the seat of sound of percussion of the chest, is about as reasonable as to suppose that

* A convenient object for illustrating this is an India rubber bottle: when its cavity is diminished by compressing its sides, the note which it yields will be raised in proportion.

* This tinkling resonance is interesting, as it gives rise to several instructive phenomena of auscultation. It may be illustrated by holding the mouth of an India rubber bottle to the ear, and striking the side of the bottle: each stroke is attended, or rather followed, by a metallic clink.—See Pathology and Diagnosis of Diseases of the Chest, 3d edit. p. 115.

a flute or a pan-pipe would yield its tones when filled with wool.

It being thus proved that the air in the lungs is not the seat of the sound elicited on striking the chest, we are driven to the supposition that the solids are the essential seat of the vibrations, and that they derive the character of their vibrations from their own degree of tension, and from the nature of the resistance offered to them by the adjoining, and especially the subjacent, parts. This is the view which I have for some years adopted, and the following remarks will, I trust, illustrate its correspondence with the phenomena, and show how it will materially aid us in the practice of percussion.

The bony frame of the thorax, bound together by elastic cartilages and ligaments, its interstices filled up by the intercostal muscles, and its whole interior lined tensely by the costal pleura, constitutes an elastic box or drum, any part of which may be readily thrown into sonorous vibrations by an impulse applied to its surface. There are, however, superimposed on this frame-work, at certain parts, various muscles, the scapulæ and the mammary glands; and the integuments, with their fatty and cellular tissues, cover the whole exterior. The effect of these is to deaden in various degrees the sound produced on percussion; and they do this both by intercepting and deadening the stroke, and also by their loose mass muffling the vibrations. It is by bringing these soft inequalities into a firm equally tense surface, on which percussion can be effectually practised, that M. Piorry's pleximeter proves chiefly useful; and by means of it, or of the fingers of the left hand applied for the same end, any part of the walls of the chest may be brought to such a degree of tension, as when struck to vibrate *according to the nature of the substance which lies beneath it.* If, for example, that substance is the air-filled tissue of the lung, it offers such a yielding but elastic resistance as gives the part struck a freedom and length of vibration; the sound elicited is therefore clear and deep-toned. If the substance under the point struck is solid and contains no air, as the liver, the vibrations being abruptly resisted, the sound has no depth or continuance, but is dull or *mat.* If a body of liquid be underneath, this will also check the vibrations, so that the sound yielded will be merely a short dead *tap* *. In pneumo-thorax, where the chest contains air instead of lung, the parietes approach more nearly to the condition of the parchment of a drum, and give, when struck, a sound unusually clear. In this sound we may often perceive a hollow or metallic character ("stomacal" of Piorry), which is not present in the pulmonary sound. This character truly *does* depend on the vibrations of the *air* contained in the cavity, which here presents a condition that we have proved to be wanting in the pulmonary tissue. The same character will be found in the sound obtained on percussion of the region of the stomach, cœcum, and other parts of the intestines, which also present the condition of a cavity in which air vibrates, and adds its note to that of the walls percussed.

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* Dr. Clendinning will perceive that this view is in perfect accordance with the results of his experiments. The sound obtained on directly striking a piece of lung or of liver, must partake of that character which that piece of lung or liver communicates to the vibrations of the thoracic walls: the lung will yield a sound by the vibration of its membranes distended with air; but as the distension is imperfect unless some pressure be used, the sound will be weak and short in comparison with that yielded by the walls of the chest exactly opposed to the entire air-filled lung. So likewise the liver, as it renders short and abrupt the vibrations of the walls of the chest in contact with it, will, when directly struck, yield its own dead sound, consisting of the same unrepeating vibrations. My worthy friend seems to imply that, according to my view, no particular sound should be yielded by the naked lung or liver; but if this were a deduction from it, how can I suppose these organs to change the vibrations of the walls of the chest? It is by their elasticity that bodies vibrate; and this motion, if sufficiently rapid, is propagated to our ears as sound. It is this same quality of elasticity, which, in different bodies placed in contact, modifies the motions, and consequently the sounds, of any one of these bodies. Sound is resisted motion, and the nature of the sound will depend on the resistance given to the motion. The same property which modifies sound of adjoining bodies, if it be capable of producing any sound, will produce sound of the quality which it communicates to the sound of the adjoining bodies. The naked lungs, therefore, and the liver, if they are capable of giving any sound at all, must give that character of sound which they communicate to the stroke on the walls of the chest. This explanation may seem unnecessarily minute; and it may suffice to most readers that I remind Dr. Clendinning that I do not deny to the solids the power to give sound on percussion, but I deny it to the air in the lungs, because I find that this air is in a condition in which it cannot, according to well-established laws, produce such a sound as that resulting from percussion on the chest. The air, by modifying the condition of the solids, alters their sounds, but by percussion gives no sound of its own.

We now see that the air-filled structure of the lung is not the only condition requisite to render the pectoral resonance deep and clear; a certain elastic tension of the walls of the chest, at the point struck, is also indispensable, inasmuch as these walls are the essential seat of the sound. The anomalous cases, adverted to by Laennec, of badly-sounding chests, where the lungs are healthy, are referable to a defect of this latter condition—elasticity of the walls. In a few cases a peculiar laxity of these walls causes the defect of resonance; but the commoner cause is a drawing in of these walls from certain conditions of the interior. Contractile pleurisies, by leaving adhesions, the constant tendency of which is to shorten, draw in the parietes of the chest, so as to destroy that equality of tension which fits them for vibration; and consequently chests thus affected rarely recover their original resonance. Another cause, which is rarer, and may be only temporary, is spasmodic asthma. In this affection the bronchial muscles are permanently contracted, so as to diminish the size of the whole lung, and the walls of the chest are kept under the constant influence of unequal atmospheric pressure, either from without or from within, which much impairs the freedom of their vibrations. In all these cases mediate percussion on a pleximeter, or on the fingers pressed firmly to the chest, will often obtain a pretty clear sound; and this it obviously effects by the pressure exceeding the force drawing from within, and by thus restoring in a measure the balance of tension.

There is another cause of defective resonance that well illustrates the subject before us. In advanced stages of phthisis, where a large portion of a lung is excavated, and a thin layer of pulmonary tissue on the pleura only separates the cavity from the parietes, this portion of the chest will sound dull, although there is actually more air in it than exists in the healthy state. The thin layer of pulmonary tissue falling loose and flaccid on the parietes, acts as a damper upon them, checking and muffling their vibrations, just as a handkerchief on a violin string will stifle its notes.

We can now understand why, on a full inspiration, the sound on percussion is higher in tone than usual: the expanded parietes are then brought to a greater degree of tension, vibrate more quickly, and therefore yield a higher note. A forcible expiration has a similar effect, with this addition, that there is a diminution of that elastic material within, which resists like a spring the stroke of percussion on the exterior. Emphysema of the lung, when it is sufficient to give to parts of the chest that rounded convex form which is so remarkable in the extensive degrees of this affection, has an effect on the percussionary resonance similar to that of a full inspiration; it renders the sound louder, but higher in key, the distended lung resisting with a stronger spring than usual the impulse of the parietes.

But the most important application of this view is to guide us in regard to the mode in which percussion is to be performed, in order to make its results bespeak the condition of the internal parts. The first precaution to be observed is, that the spot percussed shall be in such a state of tension that it may vibrate; and if this be not the natural condition of the part, a degree of pressure, with the finger or pleximeter, will give this condition to it. With regard to the stroke of percussion, I need not repeat the usual rules, that it should be made perpendicularly to the surface, and on corresponding points on comparing the two sides, &c.; but there is one particular in the practice of percussion that deserves more notice than it has received; I mean *the force of the stroke.*

According as the chest is struck gently or forcibly, so will the impulse be confined to the superficial parts, or it will reach those that are more deeply seated; and as the vibrations will be determined by the nature of the resistance which the impulse meets as far as it reaches, so will the character of the sound vary with the force of the stroke, if the superficial and the deep-seated parts differ in their densities. A want of the knowledge of this fact has been a fertile source of practical error among auscultators, especially the less experienced; and although, even when aware of it, we have still the difficulty of estimating accurately the degree of force used, and of judging between slight differences of sound, yet the following observations will, I think, shew

that attention to this matter will often facilitate the employment of percussion, and increase the number of its useful results.

In all the upper parts of the chest, the lungs in health occupy so great a depth, that the sound elicited by percussion will be of the character called pulmonary, whether the force of percussion be great or small. In the posterior regions, of course, strong mediate percussion will give the best sound, inasmuch as it overcomes the deadening effect of the thick layer of muscles in that region. But in the inferior parts, the heart and the abdominal viscera that rise in the middle of the chest, beneath the vault of the diaphragm, reduce the thickness of the pulmonary tissue in various degrees. On the right side of the chest strong percussion, carried from above downwards, generally detects a diminution of the sound below the fourth rib, which indicates the common height of the arch of the diaphragm and liver in the central portions of the chest*. Below this the sound becomes more and more dull; and in this gradual *shading off* of the sound, it is extremely difficult to define where the pulmonary sound ends, and the pure hepatic sound begins. Very gentle percussion will do this, and will distinctly elicit a pulmonary sound three or four ribs lower, down to the very thin margins of the lower lobes†. In the region of the heart, also, where the thin margins of the lung during full inspiration overlap the organ, gentle percussion will generally indicate how far the thinnest portion of lung reaches, where stronger percussion announces the resistance of the deeper seated solid. It is not equally easy to define the limits of the lung, where it overlaps the stomach or colon; for although deeper seated, the tympanitic elasticity of these organs makes them susceptible of vibration from a very slight impulse. Still a very perceptible character of pulmonary sound may be elicited by gentle percussion on these regions, which differs from the simple tympanitic resonance of an air-filled sac.

Such being the properties of the healthy chest as tested by these modified degrees of percussion, we may now see how disease will change them.

Slight effusions, whether pleuritic or hydropic, occupying the lower parts of the chest, separate the lung from its close contact with the walls of the chest, without displacing it altogether. In these cases the relations of the lower parts of the chest to percussion will be the reverse of what it is naturally: the stroke of gentle percussion will not pass through the thin layer of serum, and its sound will be therefore dull; while stronger percussion will carry its impulse to the remaining pulmonary tissue, and its sound will therefore return a certain degree of pulmonary character. Even in extensive effusions into the pleura, a small portion of pulmonary tissue, into which the air can still enter, produces a perceptible difference in the sound elicited by strong percussion, although the impulse has to pass through some inches of liquid. In practising percussion on the mediastinal confines of a pleuritic effusion, the stroke should be gentle, and perpendicular to the surface; for forcible percussion, especially if it be at all oblique, will often borrow an elastic resonance from the opposite side*.

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* That the diaphragm rises thus high in the chest is a fact described indeed by anatomists, but little attended to by physicians. My attention has been directed to this matter by my friend Dr. Edwin Harrison, who has taken great pains to investigate it.

† The best mode of making this gentle percussion is by *filliping* on a finger of the left hand pretty firmly applied to the surface. The slight abrupt impulse thus given does not reach the deeper seated parts, and yet gives a sound loud enough to be very characteristic of those which are more superficial. This mode is very useful in exploring the state of the abdomen. If it be done with care, the tenderest parts may be percussed in this way without giving any uneasiness.

* I have been for some time acquainted with the fact, that the resonance of a portion of lung could be detected through a considerable stratum of liquid; but the experiments of Dr. Clendinning and Dr. Edwin Harrison have proved this to take place to a greater extent than I was aware of. The explanation, however, is easy, in the view which I have advanced. The impulse is propagated without difficulty through a uniform mass of liquid, and if it reaches a portion of air-filled lung, whether that be on the same or on the opposite side of the pleura, that lung will affect the nature of the vibration which the impulse produces, and the sound of the stroke on the surface will be more or less pulmonary in character. Observe, the sound *on the surface* partakes of the pulmonary character, although the lung is several inches distant: no sound is heard *in the lung*, but at a remote part of the parietes, where the stroke is applied. This is another fact illustrating the position which I have advanced, that the sound which we hear on percussion of the chest is essentially in the parietes, although the character of that sound is communicated to these

Pneumonia, or pulmonary apoplexy, situated in the margins of the lower lobes, will remove the distinction given in the natural state by degrees of force in percussion; and if the disease be, as it frequently is, circumscribed, that gradual shading off of the sound on strong percussion, which I have described as perceptible in the natural condition of these parts, will be absent. In these cases, therefore, gentle as well as strong percussion produces a dull sound; and by tracing the outlines of this dulness, we shall generally find its shape to differ from that resulting from a liquid effusion.

Emphysema in the same situation will have a contrary effect, and will make it easier than usual to define by gentle percussion the limits of the lower lobes. If the emphysema be excessive, besides an unusual resonance, the sound will be higher in key than usual.

In pneumo-thorax the *shading off* ceases, the sound having every where a tympanitic character; and if, as is usually the case, liquid effusion be also present, gentle percussion will shew with great precision the level of the liquid.

In the early stages of phthisis, while the indurations are still of small extent, gentle mediate percussion will be the most likely means of detecting them. As tubercles most usually infest the summits of the lungs near the surface, and often produce pleuritic adhesions at those points, they will generally affect the sound of *gentle* percussion on the clavicles, or on the space below them; whereas forcible strokes would overcome the resistance of these small superficial deposits, and give sounds not to be distinguished from those of the healthy chest. In this very obscure and difficult point of diagnosis another rule with regard to percussion deserves attention. Aggregated tubercles can be most easily detected by gentle percussion limited to the spot: miliary granulations scattered through the tissue are more likely to affect the vibrations, by the combined resistance of many; and the stroke should be therefore applied to a larger surface. Gentle percussion on a single finger, or a small pleximeter, will be the most likely to afford indications of the presence of the former; while scattered granulations may be better detected by mediate or immediate percussion by the fingers of the flat hand applied over some inches of surface. In examining a doubtful case, both these methods must be used at different periods of the respiratory movements; and I can state, from some experience, that attention to these particulars will leave many fewer of the cases of incipient phthisis in that negative uncertainty that has been the reproach of even the present improved state of diagnosis.

It is unnecessary to dwell on other applications of these principles, to indicate how percussion in its modifications may be rendered an easier and surer test of disease: as, for instance, flat percussion, in humid bronchitis, first stage of pneumonia, and œdema of the lungs, giving some mark of the extent of the effusion; strong percussion giving an outline of an enlarged heart, or of any deep seated condensation; gentle mediate percussion indicating with exactitude the state of the more superficial contents of the chest and abdomen; and so forth. But having called attention to the principle of percussion, and having, as I trust, made that principle intelligible in the more important of its applications, it remains for an accurate knowledge of pathology, and the opportunities of a varied experience, to make it more useful than any further description of mine could render it.

parietes by the subjacent parts. When lung lies under them, the sound is what is called pulmonary; when liver, it is dull; but when both liver and lung, the sound is not double, as if proceeding from both as sources, but between both, as if consisting of vibrations which result from the elasticities of both simultaneously influencing the vibrations of the walls. So it is, also, when a layer of liquid adds its effect.

ON THE

SENSE OF TASTE.

To the Editor of the Medical Gazette.

Sir,

I certainly had no intention to wound the feelings of Dr. Alcock in my communication which appeared in the Gazette for December 17th, commenting upon the conclusions at which he had

arrived relative to the nervous connexions of the sense of taste; and I trust that much of the soreness of spirit which his reply to my remarks evinces, will be found to have originated mainly in the misapprehension of part of my meaning, to which I may further allude in the sequel.

Dr. Alcock ranges under three heads what he is pleased to call my imputations against him. I will follow the example which he has set me, and discuss the topics of difference between us under three distinct heads. If any accusation of want of candour have been brought by me against Dr. Alcock, it rests upon these grounds—that he, in his paper, as published at length in the Dublin Journal, prefatory to any account of the experiments which he had performed, offers a variety of considerations, drawn from various sources, to show the independent character of the sense of taste, and yet omits a reference to cases demonstrating the fact. But further, it appears to me, and may appear to others, that the first case published by me, in connexion with this subject, leads to inferences totally at variance with those of Dr. Alcock. In this way: the case of Mrs. Williams, to which I allude, furnishes an instance of complete paralysis of the *sentient* portion of the fifth nerve on one side, and yet the patient *tasted perfectly* on the corresponding half of the tongue. Dr. Alcock artificially induced paralysis of the tongue in a dog, by division of the lingual branch of the same nerve, and discovered that a very material diminution of the sense of taste was the consequence. Now I do not say that here are contradictory results, because the data are not precisely similar; but it does appear to me that the difficulty should have been fairly met by Dr. Alcock, inasmuch as he was evidently not unacquainted with my papers upon the subject. It is true, as stated by him, that whilst my own data were pathological, his were purely physiological; but nevertheless, in deducing a general inference, neither class of phenomena can be so insulated as to exclude all communication with the other, more especially when any discordance appears to exist between the two; for in all such cases the appearance of discordance must be made to vanish, or the conclusion is inevitable that error exists somewhere. On these grounds, then, do I regret that, in assuming to have determined the question relative to the nervous relations of the sense of taste, Dr. Alcock had not the candour to refer to what had been previously offered to the profession, in apparent opposition, by myself. But, says Dr. Alcock, the cases which I have published "require to be confirmed and put beyond doubt." In regard to this, I have only to observe, that the experiments upon the first case have several times been repeated, with uniform results,—that, as stated by me in the Medical Gazette, the second case was furnished by Mr. Ker, before whom and Mr. Walker the particular examination was made,—and that I had the perfect concurrence of those gentlemen in the accuracy of the investigation and of the results. And in further confirmation, I may refer to the corroborative instance furnished by your correspondent, Mr. Bishop, and published in the Medical Gazette for February 6th, 1836, who, towards the conclusion of a paper written *in opposition to my own reasoning* on this subject, most honourably and faithfully observes—"A case in illustration of this theory has been brought to my notice by Mr. Roberts, in a woman, aged about 45 years, who has nearly lost the common sensibility of the whole right side of the face, including the eye, nostril, and tongue, which latter part, however, retains a slight perception of touch, but the taste on that side is entirely abolished, so that neither vinegar, salt, nor ordinary aliments, produce the slightest impression, — a circumstance exactly agreeing with the experiments of Mr. Noble."

When Dr. Alcock states that "every tyro in physiology knows that, according to the popular opinion, taste is as distinct a sense as any other," and that the doctrine, that taste is a special sensation, was received of physiologists before he was born, I am anxious that we should not misunderstand each other in the employment of terms. To avoid risk of being myself misconceived, I will repeat that the object which I have always stated myself to have had in view in what I have written upon this subject, has been to determine that taste maintains as special and independent a character as the rest of the senses; and, accordingly, that, as in the case of sight, hearing, and smell, we must look for a *special* nervous pro-

vision. And the evidence which I have offered in support of this view is, in my own judgment, of the most satisfactory nature. Nor is mine a novel mode of deducing such an inference. The fact of feeling and voluntary motion not being impaired or annihilated simultaneously, first led to the conclusion that there were distinct nerves for these functions. And so far back as the days of the celebrated Alexandrian School, founded by the Ptolemics, this was maintained on such grounds, and was even taught by Erasistratus. From precisely similar data, from pathological facts, have I contended for distinctness of nerve coincidently with speciality of function in the case of taste and common sensation. Will Dr. Alcock contend that this is a doctrine known to every tyro in physiology, or that it has descended to us from our ancestors? I think he will not. Will he, then, have the kindness to state, in terms equally definite and precise, what he means by a special sensation, and how he considers that taste is proved to be such by his own experiments.

Dr. Alcock asks for my meaning when I state that it is a recognised principle in the physiology of the nervous system, "that a simple and special function must have but one simple nerve for its manifestation." In explanation, I shall be glad to adopt the "strict interpretation of the principle," as furnished by himself—"that the manifestation of a simple and special function *can* have but one simple nerve." But, he goes on to inquire, "where among our senses do we find the confirmation of this?" In reference to this matter, I join issue with Dr. Alcock upon a plain, undoubted, matter of fact; and, in opposition to him, contend that we have such confirmation in *all* the senses,—that the optic nerve is the sole and special medium of vision,—that the olfactory nerve is the special and exclusive medium of smell,—and the auditory nerve that of hearing. Because I have appealed to the authority of Sir C. Bell, Dr. Alcock calls in the aid of Magendie. Now, in reference to the importance of this latter as an authority, I have to observe that Magendie, as an experimenter, must be universally allowed to rank as one of our "leading authorities;" but, as a propounder of principles, few, I am sure, will bow to his name. It will not surely be maintained that the one talent necessarily implies the other,—that it is not one thing to hew and carve the stone, and another to arrange and raise with architectural design. If any one should feel disposed to award to Magendie the peculiar genius of Bell, let him just refer to the section on this very subject, on the senses, in the work of the former physiologist, where, if I mistake not, he will find any thing rather than precision of thought and consistency of statement. But Dr. Alcock appeals to direct facts in support of the consistency of his own inferences, and asserts that "smell is not perfect without the fifth nerve." That a material derangement of the function of the fifth nerve may, in many cases, sympathetically affect the function of the first, I feel no doubt; but that impressions of odour are communicated to the brain by any other medium than the olfactory nerve, I entirely deny, and with that positiveness with which Dr. Alcock asserts the contrary. Dr. Alcock next affirms that "amaurosis is the consequence of an injury of the fifth nerve." Is he serious? Why, examples are on record of even total destruction of the fifth nerve, without any such results; and, not to pursue this matter with unnecessary prolixity, I will refer Dr. Alcock to one instance. In the Medical Gazette, for December 12, 1835, there is a paper by Mr. Bishop, detailing the history of a case of facial paralysis, wherein a post-mortem examination was carefully made by him, in the presence of Dr. Roget and Mr. Robert Wade; and in his account the following observations occur:—"In the case just related the whole of the fifth nerve was completely destroyed, whilst both the eye and nostril of that side had lost their sense of touch, *retaining the faculties of vision and smell.*" This case during life had been seen by Dr. J. Johnson, Dr. Roget, Sir Benjamin Brodie, and Sir C. Bell. Dr. Alcock next observes that, in one of my own cases of facial paralysis, the hearing was imperfect. Well, what of that;—therein is coincidence, but where is the consequence? Again, Dr. Alcock asks how I reconcile with the "recognized principle" my own conclusion relative to the function of the chorda tympani, and other branches of Meckel's ganglion, which he states to belong to the fifth. In answer to this, I can assure Dr. Alcock that I

have drawn no conclusion at all upon the subject, and that far from disliking the term "suggestion," as he appears to think, it is what alone I can recognise as applying to myself. I have never done more than *suggested* a function for these nerves. But are they branches of the fifth, in the ordinary acceptation of the term? Certainly not, but branches of the spheno-palatine ganglion; communicating with the fifth, it is true, but not being derived from it. As well may it be said that the solar plexus of nerves are branches of the par vagum. If I understand Dr. Alcock aright, he means to affirm, in confirmation of his own views, that although the glosso-pharyngeal nerve is simple in its origin, its function must be compound, because of its distribution. This, I apprehend, is a mode of proof which few will deem admissible. When reference is made by Dr. Alcock to Magendie's notions regarding the multifarious operations of the fifth nerve, he surely does not think that he thereby enhances the importance of this physiologist as a "leading authority" in the promulgation of "principles." With respect to the opinion of Dumeril and Serres on the nerve of smell in the dolphin, I refer Dr. Alcock to Bostock's Physiology, where he will see good reason for believing that such is not only a mere opinion, but one resting on very slight grounds. These, then, being the leading facts and circumstances adduced by Dr. Alcock in support of his own physiological consistency, it is for your readers to decide how far they tend to overthrow the doctrine of Sir C. Bell and others—that a simple nerve performs only one function, and that a strictly special function requires a distinct nerve for its manifestation.

Dr. Alcock, lastly, complains that I have impeached his veracity, and am thereby equivocal and offensive. Surely such a complaint can only have had its origin in some strange misconception of my meaning. When I said that the accuracy of supposed facts must be established before a necessity arises for modifying the definition of principles, I was obviously alluding to what Dr. Alcock considered himself to have established as matter of fact, that "taste had two media of perception." I distinctly stated, that as I objected entirely to the mutilation of living animals as a mode of "determining the question," I should not enter into any detailed examination of the contents of the paper; how, then, should I be understood as questioning Dr. Alcock's fidelity of narration? I sincerely hope this explanation will allay the angry spirit he has evinced, and which, I would gladly hope, has only been roused by some such misapprehension.

In conclusion, I can assure Dr. Alcock that he is thoroughly mistaken if he considers that, in this matter, I have been influenced by merely personal considerations. I never charged him, as he supposes, with want of candour towards me; but, considering that certain results, which he had obtained from what I believed to be an objectionable mode of investigation, were irreconcileable with those at which I had arrived by another mode, I expressed regret that Dr. Alcock had not had the candour to refer to them; more especially as he had drawn a similar inference to my own, from what I believed to be opposite data. It is impossible that I should have had any personal feeling on the puerile grounds Dr. Alcock seems to have imagined. On the contrary, had merely personal feeling influenced me, I must have felt gratified with the somewhat complimentary allusion made to myself in his original paper. But I trust that I am actuated by motives of a higher character than he appears to have supposed. I, too, like himself, am "seeking after satisfactory knowledge," and shall not be deterred from taking my own steps to obtain it, or from attempting the confutation of what I believe to be erroneous notions, even at the risk of being misinterpreted, and exposing myself to the ireful declamation of Dr. Alcock.—I am, sir,

Your obedient servant,

DANIEL NOBLE.

Manchester, Jan. 14, 1837.

ACTION OF THE HYDRIODATE OF POTASS,

ACCORDING TO A NEW HYPOTHESIS.

To the Editor of the Medical Gazette.

SIR,

As the purpose of your valuable journal is to afford a medium of instructive

communication to its numerous readers, they, in my opinion, are justified in opposing every new theory or hypothesis which appears to them erroneous, as well as to support that which they approve, by publishing the result of their experience.

Whatever fortunate practical results Dr. Hake may observe in the administration of hydriodate of potass, their publication to the medical world is meritorious; but when he attempts to establish a new doctrine as regards disease, and an hypothesis as to the *methodus operandi* of his remedial agent, in an unsatisfactory manner to others, those may be allowed, through the same channel, to express their motives of dissent. Under such an impression have I perused the present communication.

Granting to Dr. H. that the hydriodate of potassa is a tonic and stimulant —that a stimulant produces on the animal economy an increased action, meaning in this instance, I presume, an abnormal one—and that such a condition may be either irritable, inflammatory, or debilitated, or all these occurring in a sequence; Dr. H. having ascertained under which of these diseases his patient labours, for supposition sake be it the inflammatory, he begins by converting that into the irritable, then proceeds with rendering the irritable the debilitative, and the latter he changes into the normal or regenerative. Reasoning thus on the gradation of the primary stage of disease into the secondary, thence that into the tertiary or final one, the induction is obvious;—the stimulant powers of the medicine convert inflammation into irritation, and the latter into debility, at which precise period come the tonic effects into force, to remove weakness, and regenerate the afflicted system.

The acute stages of rheumatism, exanthematous diseases, and gastritis, are excepted, the former on account of "febrile symptoms," and the latter on that of local irritation: and in this exception are also included "those disorders where there may be no excitement of the system, although there exist local irritation of the stomach and intestinal canal." Thence we are to infer it is not to be given when the excitement is general, nor when there is no excitement at all! This amounts to what logicians would pounce upon as a "contradiction of terms;" if not, then why could not the chemical remove local as effective as excitement, particularly since we are informed of its capacity of converting an inflammatory stage into its sequence, either resolution, suppuration, or gangrene; but, I beg pardon, I mean the Doctor's new theory—irritation and debility. The reply is given in the paper, "we must wait the circumstances attendant on its exhibition being adapted to this kind of action;" by which, I suppose, is meant the medicinal, as that appears to me the relative to the antecedent, and not the morbid action. If I err in the former inference, then your readers are led to consider that the local irritation, or inflammation, is first to be removed, with a view of establishing the sequent stage of disease, when either the stimulant or tonic powers of the medicine come into operation, and cure. A very facile method, yet to me not altogether satisfactorily comprehensive.

In what varieties of chronic rheumatism and diseases of the skin it acts so specifically, the forthcoming cases will prove. In sympathetic gastrodynia, we are told, the "prime remedy" will magically act, provided its stimulating powers be antagonised by internal adjuncts, or counter-irritants of the anodyne kind, for by these the diseased locality is shielded from the injurious effects of an actual contact of the chemical, while its diffusive "tonic powers are active in elevating the natural tone of the debilitated mucous tissues." Thus the local irritation of the stomach, and the remote one of primary disease, are at one and the same moment wonderfully removed. The doctor's episode on the "invisible lovers of science, considering hypothesis as inimical to philosophy," is pretty, but he cannot deny that hypothesists are too frequently like so many Ignes Fatui,—lead the inexperienced astray, and that these "admirable deceptions of nature" simulate Dr. H.'s favourite hypothesis. It is, indeed, an "admirable deception" of the intelligent hydriodate, by simulating the action of chyle to stimulate the lacteals, *who*, endowed with intelligence, finding the proffered stimulus not chyle, though hungry and thirsty, refuse the nauseous medicine; yes, even when that medicinal stimulus had aroused, excited them to the most active state for absorption.

So those Lilliputians are by the

Brobdignagian laughed at for the vain effort of absorption, without the gratification to act! Tantalizing doom! The doctor tells us this is the reason why the enlarged mesenterie glands are so easily diminished. Mirabile! the mesenterie glands, then, are on the mucous surface of the intestines, surely the non-absorption of the hydriodate implies them there! Has it never occurred to Dr. H., that his Plummer's pills might have been, as they often are, so dry, hard, and unassimilatable, as to remain in the course of the intestinal canal, until the hydriodate was given, when chemical decomposition may have ensued, and the iodate of mercury formed; the fractional part of a grain of which, in few repeated doses, would cause the very powerful ptyalism ascribed as a newly discovered property of the hydriodate of potassa. The admirable metastatic effect of this endowed chemical suits wonderfully well the thousand-and-one antipodian stages of disease, which by its beautiful mutation from stimulant to tonic, are to its foe in open plain, vigorous, and in the ambush. Since the hydriodate possesses the "wonderful" property of affecting the nervous system, we might have almost expected an electric shock—the stimulant answering the positive, and the tonic the negative pole. As Dr. H. finds it of such intelligent power in removing morbid "thickening structures of the bronchial mucous integuments," we may, *à priori*, expect similar beneficial results from its administration in ossifications of the aorta. Your readers will easily perceive with what "wonderful" tact the Dr. supports his doctrine, and deduces his inductions, for which he deserves the palm of ingenuity.

We have in him, *sub rosa*, a supporter of one of the leading principles of Hahnemannism, "a medicine producing a disease it is capable of removing." Finally, the wonderfully intelligent hydriodate *produces* pain in cases of enlarged prostate, while, Oh, beautiful deception of medicinal remedial nature! with what tenderness she diminishes the parturient throes of the agonised female.

Apologising, sir, for the length to which my remarks have unwarily drawn me, I pass over others, and trusting that this letter may find a place in your widely circulated journal,—I remain,

Yours obediently,

W. W. Morgan, M.R.C.S.

Surgeon to the Bury Dispensary.

Bury Dispensary, near Manchester,
Jan. 7, 1837.

MORBID APPEARANCES IN AN AGED BEDRIDDEN PERSON.

To the Editor of the Medical Gazette.

Sir,

Having lately witnessed the post-mortem examination of an aged person, bedridden for thirty-one years, and whose case presented some very obscure symptoms, I send you this outline of the inspection, thinking it might be worthy of publication.

John Evans, of Towcester, aged 75, died 19th September last. He was very corpulent, and large in stature; his faculties were good almost to the last; his disposition was irascible; only a few months before death he attempted to cut his throat.

His appetite for food was not bad, and he rested tolerably well at night, considering his infirmities. Bowels generally regular; voice strong.

A difference of opinion prevailed respecting the disease he laboured under: some supposed him to be the subject of calculus, though the symptoms of this were obscure. Many years ago he was a patient in the Northampton Infirmary, under the care of the late Dr. Kerr; but after remaining there for many weeks he was discharged, his case being considered too obscure to admit of any immediate or beneficial treatment. Notwithstanding his labouring under the above symptoms, together with an irreducible inguinal hernia on the left side, it was conjectured by many persons that his complaints bore stronger indications of imposture than of real disease.

On dividing the integuments of the abdomen, a thick layer of fat was cut through, an inch in depth, before arriving at the tendinous expansion. The parietes being divided, and the viscera exposed, the peritoneum was found healthy,

containing about half a pint of serum tinged with blood. The great omentum was curled upwards to the arch of the colon. Stomach and intestines looked healthy. The liver rather small, of a pale brown colour; its structure by no means firm. The gall-bladder contained forty-five calculi, the size of small peas, with a small quantity of green bile; ducts pervious. In the right kidney were found seven calculi, embedded in its substance, each about the size of a nutmeg, forming a sort of cluster. The left kidney was devoid of such obstruction, though its structure was much softer than natural. The right ureter was pervious and healthy; the left was somewhat larger, and within it were found three irregular portions of calculous concretions, just at its entrance into the pelvis: how long they had been lodged there it is impossible to say. In short, the right kidney and left ureter presented an aspect totally different from the left kidney and right ureter.

On cutting through the urinary bladder, a large calculus was found inclosed in the fasciculi of the viscus, just behind the symphysis pubis. When removed it appeared smooth and firm, of an oblong shape, and weighed twelve drachms and one scruple; composed of phosphate of lime. I think it not improbable this stone had existed a great length of time. Two smaller calculi were found lying loose in the cavity of the bladder, near its base; these were of the same consistence: one weighed a drachm and a half, the other two scruples.

The coats of the bladder were much thickened; its mucous lining exhibited much redness. The prostate was not larger than usual for his age.

It would appear that the urine was principally secreted by the left kidney, as being the more healthy of the two. The patient voided his urine at proper intervals, without much difficulty. I do not think he ever required the catheter of late years; but I am informed that he frequently had a discharge of fluid from the umbilicus, exactly resembling urine both in smell and colour. He had always been of a temperate habit.—I am, sir,

Your obedient servant,

JOHN COLLIER, M.R.C.S.

Brackley, Dec. 30, 1836.

OPIUM IN TYPHUS FEVER.

To the Editor of the Medical Gazette.

SIR,

ALLOW me to send you the following remarks on the efficacy of opium in typhus fever, for insertion in the GAZETTE, should you consider them worthy.—I am, sir,

Your obedient servant,

CHAS. A. CADDY, M.R.C.S., &c.

Bideford, Devon, Jan. 14, 1837.

Vol. 14th of the MEDICAL GAZETTE contains two excellent clinical lectures on typhus, by M. Chomel. The mode of invasion and appearances after death, &c. are therein accurately described; and to them I beg to refer, as prefatory to my remarks on the treatment.

In the year 1827, typhus was very prevalent in this neighbourhood, and the mortality very great. I attended at that time, amongst others, the family of a respectable farmer: five were ill, and three died. An old, experienced practitioner, visited with me. The treatment then adopted was the one recommended by the late Dr. Armstrong, and consisted of bleeding in the onset, with rhubarb and calomel, and purgatives, with a partial sponging of the body with cold water, &c. Not any of the preparations of opium were given.

In the autumn of 1834, I had about one hundred and twenty cases of typhus under my care, and the only fatal one was that of a girl about nine years old, who was in the third stage when first visited by me. The treatment adopted was the free use of the tincture of opium, in addition to those other means recommended. I shall endeavour briefly to illustrate the treatment by the following cases:—

On the 14th of November, 1835, I was called to visit John G——, a labourer, aged 32. I found him in the third stage; skin hot and dry; face dark red; delirious; sordes about the teeth, and the tongue brown and dry; and with tenderness over the stomach, &c. Applied a blister over the pit of the stomach, gave him thirty drops of tincture of opium in a little water, and ordered free applications of cold water externally, with change of linen twice

a-day, the removal of all unnecessary furniture from the room, &c. Diet, gruel and toast-and-water. The after-treatment consisted of two grains of rhubarb and three of magnesia every four hours, with a full dose of opium twice daily. He gradually recovered.

On the 16th, on my visit to the above, my attention was directed to his brother, aged 14, who sat pale and shivering over the fire. He had complained of fatigue and shivering on the previous evening. He was ordered to bed, and took an emetic, followed in two hours by twenty-five drops of the tincture of opium. On the following day all symptoms of fever were gone.

When aperients are requred, to counteract the astringent effect of opium, or otherwise, I have found castor-oil the safest; but if the bowels are irritable, instead of rhubarb and magnesia, I substitute two grains of Dover's powder, or the compound powder of chalk, or carbonate of soda; restricting the diet, in all cases, to gruel, arrow-root, coffee, tea, and toast-and-water. No fruit or preserves, or animal broths, during the existence of fever. Bleeding is generally required after the first shock is past; and in all cases where the first stage is fully developed, cupping or a blister over the stomach. I have had many cases of typhus under my care during the last autumn, and in all opium was given, and with the greatest success; acting as a charm on the cerebral affection so generally attendant on typhus.

MIDWIFERY.

EXPULSION OF THE PLACENTA BEFORE THE BIRTH OF THE CHILD.

To the Editor of the Medical Gazette.

Sir,

By inserting the following obstetric case at your earliest convenience, you will much oblige

Your obedient servant,

J. H. Bull.

Lindfield, near Cuckfield, Sussex, Jan. 5, 1837.

On the morning of the 7th of December, I was summoned to attend a poor woman in labour with her sixth child, residing at Ditchling Common, about five miles from hence. Upon reaching her abode the nurse immediately came down stairs, and informed me that about two hours before she had had most alarming hæmorrhage, from the effects of which much exhaustion ensued; however, on the recurrence of her labour pains she had expelled the placenta, and the fœtus still remained *in utero*. To my great astonishment, on visiting the patient, I found the nurse's statement quite correct. The placenta was placed in a receptacle on the bed, the funis not as yet separated, and, of course, no pulsation perceptible; and, to add to all the foregoing disasters, there was a presentation of the arm as high as the axilla. Notwithstanding which, to my great satisfaction there was powerful uterine action. After encountering some difficulty, I succeeded in turning the child, and delivered her forthwith. I attribute the child's death solely to the expulsion of the placenta, as, from all appearances, its demise was of recent occurrence. Suffice it to say, the poor woman has had scarcely an untoward symptom since, and is now quite recovered.

SUPPOSED RUPTURE OF THE INNER COATS OF THE BLADDER,

WITHOUT INJURY TO THE INVESTING PERITONEUM.

To the Editor of the Medical Gazette.

Sir,

Should you consider the following case sufficiently interesting to the medical profession to deserve insertion in your valuable publication, it is at your disposal.

I remain, Sir,

Your obedient servant,

Wm. T. Keal.

Oakham, Dec. 20, 1836.

Early on Tuesday morning, Dec. 29, 1835, I was requested by a medical friend to accompany him a few miles, to advise in the following case: the particulars were communicated by my friend in our way to the village:—

The subject of the case was a young man, about two and twenty years of age: he had been labouring under stricture of the urethra about a fortnight, the consequence of a recent gonorrhœa, when he was knocked down by a horse, on the 26th, about noon. The horse in stumbling fell upon the lower part of the patient's abdomen; he felt pain soon afterwards about the pubic region, accompanied with a more frequent desire to pass his urine, which he accomplished with no more than the ordinary difficulty. In about eight hours after the accident the difficulty increased, and soon retention became complete.

Up to that period there had been no discolouration of the urine. The retention continued till Monday evening about eight o'clock, when he passed a moderate quantity, which relieved him from pain, and he slept from ten till two o'clock. On awaking there was much pain, with an extreme desire to make water.

His medical attendant was now for the first time sent for, and upon his arrival, finding the retention accompanied with much agony, immediately returned home (a distance of two miles) for a catheter.

On his return the patient informed him, that during his absence, in attempting to evacuate his urine, he had experienced a sudden "crack" (to use his own expression), and an immediate sensation of cold pervading the pubic region, at the same time finding relief from the distressing pains under which he was previously suffering. Upon our arrival we found our patient comparatively easy, though there was tenderness of the abdomen, with a sense of distension, but no circumscribed tumor, as in cases of retention without laceration. I immediately suggested the introduction of the catheter, and at least two quarts of bloody urine were drawn off. The stricture caused considerable impediment to the introduction of the catheter.

The patient experienced much relief after the operation. The pulse being full, I advised a copious bleeding from the arm, to be followed by leeches to the pubic region, with subsequent fomentations. I also suggested a saline aperient, afterwards calomel and antimony in repeated doses, and an opiate at bed-time. It was considered essential to pay due attention to the frequent use of the catheter.

I did not see the patient again, but was informed by my friend, that after using the catheter for two days, he was able to pass his urine without its aid, and was free from all abdominal pain; and he considered him recovered from the injury of the bladder. The stricture was subsequently cured, as was also an attack of orchitis. The patient has continued free from any consequences whatever of the injury.

THE NEW PHARMACOPŒIA.

NOTE FROM MR. EVERITT, IN REPLY TO MR. PHILLIPS.

To the Editor of the Medical Gazette.

Sir,

I am quite at a loss to see the appropriateness of Mr. Phillips placing, in relief, in his letter to you, misprints which did not occur in your journal, although they did appear in the *Lancet*.

Mr. Phillips attributes the error in the Latin edition, of ordering three measures of water in the room of two (or more correctly, one and three-quarters), to be mixed with one measure of the strong liquor ammoniæ, to reduce it to the weaker, to a misprint; by a curious coincidence, the same misprint occurs in his English translation. The last paragraph of Mr. Phillips' letter, in which he apparently has me on the hip, will lose all its point when a reference is made to that part of my communication to which he alludes. Every one knows how changed the meaning of a few words may become by separating them from their associates. In giving the process for making liquor ammoniæ, it is very evident I confined myself to a general description, and did not intend to give the exact strength of the product; for I said, "put *about*" (a little word omitted by Mr. Phillips) thirty parts of water into the receiver; and then, a few lines further on, I contended that ten ounces of sal-ammoniac can, in practice at any rate, make thirty fluid ounces of liquor ammoniæ of ·960, in the room of only fifteen, as prescribed.

	Grs. of Ammonia.
Now 10 oz. of this salt contain ..	1511
And 30 fluid oz. at ·960 contain ..	1260
Hence very liberal allowance (1-6th) for loss	251

Hence, I think, I did not wish to get more ammonia out of the salt than it contained; although, on the other hand, I do contend, that the process of the Pharmacopœia, where 881 grains out of 1511 are admitted to be lost, is one which no manufacturer will follow, and which ought not to have been in the edition of 1836.—I am, sir,

Yours sincerely,

THOS. EVERITT.

Medical School,
Middlesex Hospital, Jan. 16, 1837.

DISEASES OF NORTH SHIELDS,

AND THE SURROUNDING DISTRICT.

To the Editor of the Medical Gazette.

SIR,

IT may not be uninteresting to some of your readers who reside in parts of the kingdom remote from this, to learn something of the diseases which have chiefly prevailed during the past year in this district, together with the state of the weather during their rise and progress; and as the weather during that period has been of a marked and unusual character, so have diseases assumed somewhat of a peculiar nature.

The winter of 1835-6 was unusually mild, the thermometer being rarely below 50, except on two or three occasions, when we had slight frost, which never continued more than six and thirty hours at a time; this mild weather continued until nearly the end of February, during the whole of which time little complaint seemed to exist; in point of fact, I have invariably found mild open winters infinitely the most healthy, in spite of the old proverb: the only complaint which manifested itself during this period was the small-pox, which has continued to hold its course up to the present time, apparently quite uninfluenced by atmospheric changes of any kind. At the end of February, the east wind set in with even more than its usual bitterness, bringing in its train coughs, sore throats, and inflammatory complaints, more especially of the lungs and air-passages: an epidemic resembling influenza made its appearance, not unfrequently accompanied by bronchitis; measles also prevailed, with a great tendency to croup; acute rheumatism was also of common occurrence; altogether a decided inflammatory diathesis pervaded all diseases occurring at this time, and I had occasion to call the lancet into requisition more frequently than for three or four preceding years. Things continued much in this state until the beginning of June, up to which time no rain had fallen, occasioning a serious want of herbage: early in June rain began to fall, and continued with little intermission during the whole summer and autumn, the wind being for the most part W. and S. W., the weather being cold, and thunder of frequent occurrence. A visible change was effected in the nature of diseases by this alteration in the weather; the inflammatory diathesis disappeared, as also did measles, which was succeeded by scarlet fever, and an extraordinary hæmorrhagic tendency manifested itself, appearing most commonly as hœmoptysis, but also in the tendency of the exanthemata to terminate in purpura, and in the frequency of abortion and of uterine hæmorrhage after delivery. I may also here state, that cutaneous diseases were more common, and strumous tumors of more than usual frequency, probably from the functions of the skin being impaired by the state of atmosphere; but what is not a little singular, I did not see or hear of a single case of autumnal cholera, nor even of diarrhœa.

In October we had a considerable fall of snow followed by a succession of rainy weather, which abated at the beginning of December, from which time it continued mild and dry until the 23d, when a snow storm set in, accompanied with thunder; a severe frost succeeded, and the snow lay until the 5th of January, since which time we have had a rapid succession of frost and thaws. I am the more particular in noticing this, as the influenza made its appearance on the 6th, and has gone on increasing ever since, and I am certain I do not overrate it, when I say that at this moment ten per cent. of the population of this district are labouring under it: its usual mode of attack here is, by cold rigors, intense pain in the head, coryza, irritation about the trachea, incessant cough,

extreme lassitude, and pains in the limbs. The best mode of treating it seems to be, to confine the patient to bed; diet, warm diluents; and such remedies as will keep the skin open, and promote expectoration. Mist. salinæ and vin. ipecac. seems to answer both indications. I have seen no case in which bleeding was requisite, or even admissible; and one peculiarity of the disease is, the disposition to fainting, which is readily induced by active purging, rendering it advisable to administer such aperients as do not lower the system.

In taking a review of the diseases mentioned in the foregoing relation, we can feel no surprise that the cold east winds should have given rise to inflammatory complaints; but it is by no means so obvious what could occasion so great a tendeney to hæmorrhage. How far cold and moisture, together with a highly electrical state of the atmosphere, is capable of producing such results, the present state of our knowledge does not admit of our being able to determine; but it is a subject well worthy of attention, and one whose investigation will probably lead to important results.

I remain, Sir,

Your obedient servant,

EDWARD GREENHOW, M.D.

North Shields, Jan. 14, 1837.

STRANGULATED INGUINAL HERNIA.

OPERATION AND RECOVERY.

To the Editor of the Medical Gazette.

SIR,

I AM induced to offer the following case of hernia for insertion in your valuable journal, on account of an appearance which I believe to be unusual. I allude to the peculiarity of the contents of the sac.

Samuel Hart, æt. 45, drayman, states that he has been subject to a rupture (oblique inguinal) on both sides for fifteen years, which he has always been able to return with readiness. Having lately obtained a new truss, and finding the pressure from it uncomfortable, he took it off on Saturday morning, December 30th. Shortly afterwards, whilst walking from the fire to his bed, the rupture on the left side came down, and he was not able to return it. He soon began to feel pain across the abdomen, attended with vomiting, which continued with little intermission. The rupture, which at first was not larger than a walnut, had been gradually increasing; and when I saw him, for the *first* time, on the following morning, at 10 o'clock, it presented these appearances:—Its form was pyramidal, measuring about six inches from the external abdominal ring downwards, and about three inches and a half in its transverse diameter; it had a tense and elastic feel; no pain was experienced upon pressing any part of the tumor, except at a point immediately over the seat of the stricture. He complained much of pain in the abdomen, just below the umbilicus, which was also aggravated upon pressure. The abdomen was soft and yielding; pulse 100, somewhat incompressible; tongue moist, and slightly furred; bowels not open since yesterday morning; countenance very anxious. After fruitless efforts to return the rupture, I bled him to faintness, and again renewed the attempt, but was equally unsuccessful. He was then ordered to keep ice constantly applied, and an active purgative was prescribed. At half-past two my father accompanied me to visit the patient. We found him nearly in the same state, but stercoraceous vomiting had supervened. After again employing the taxis, a tobacco enema was administered: great depression of the vital powers ensued, but the hernia continued irreducible. We then judged it better to leave him for an hour or two undisturbed, directing him to continue the application of ice, being determined, if after that time the hernia remained irreducible, to proceed immediately to the operation.

At half-past six, having once more endeavoured to return the intestine without any better success, I proceeded to perform the operation, in the presence of my father and Dr. Rowland. It is unnecessary to describe all the stages of the operation: the sac having been exposed, there was considerable difficulty, on account of its great tenseness, in pinching up a portion for the purpose of dividing it. An opening being made, about four ounces of serum gushed out. When the sac was laid open, a large mass of coagulable lymph presented itself, having the appearance

of calf'-foot jelly, only of a darker colour, not adherent, and which totally concealed the protruded intestine. This jelly-like substance, which formed the bulk of the tumor, being removed in one large mass, a moderately sized knuckle of intestine was observed, in a highly vascular state, with laminæ of lymph adherent to it, of the same colour as that contained in the sac. The sac itself was quite free from inflammation. The stricture being divided, the operation was completed in the usual manner. An opiate was given at bed-time, and he passed the night without much pain. In the morning he took some castor-oil, which not having produced any effect at noon, an injection of warm water with some salt was administered. The bowels were soon freely opened, from which time he has recovered without one untoward symptom.

I remain, sir,
Your obedient servant,
HENRY TAYNTON.

39, Queen-Square, Bloomsbury,
Jan. 18, 1837.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Practical Observations on Nervous and Sympathetic Palpitation of the Heart; particularly as distinguished from Palpitation the result of Organic Disease. To which are prefixed some General Remarks on the Use of the Stethoscope and the Employment of Percussion, in the Diagnosis of Diseases of the Heart and Lungs. By JOHN CALTHROP WILLIAMS, M.D. Edinburgh.

THE object of Dr. Williams is to point out the distinguishing marks of palpitation dependent on functional disturbances. We do not find, in the general remarks which he makes on the use of the stethoscope and the employment of percussion, any thing of particular interest or novelty; indeed that part of the work is almost entirely composed of of extracts, while the writers referred to are nearly all "learned and talented," and their works all either "valuable" or "very valuable." A distinct, if not a general view, is given of nervous and sympathetic palpitation, and several very good cases adduced in illustration. In one the disease originated in the sudden communication of distressing intelligence, which led to movements of the heart not violent, but tumultuous, with a thrilling sensation in the limbs: occasionally the palpitations were accompanied by a "cooing sound," and at other times the pulse was intermittent. The patient recovered gradually under the use of aperients and tonics, particularly iron, which was freely administered. In the second case, a young lady addicted to starving and tight lacing, became affected with palpitation.

"She could not bear to lie down because of the heart's pulsations, which she was constantly counting; she had at times the fear of suffocation; her appetite, which she had long refused to gratify, in the course of time left her; an annoying dry spasmodic cough, the sound of which was noisy and metallic, supervened; her legs swelled; and feeding her imagination with every kind of apprehension of evil, she became so reduced and so irritable, that she was obliged to withdraw from society. She always described the movements of the heart as of a fluttering kind, accompanied with a sensation of sinking, and a feeling of emptiness in the epigastrium. They varied much in regard to the degree of intensity; and at times, even when she complained of them as very distressing, they were scarcely perceptible to the observer. The sound proceeding from the contractions of the chambers of the heart, always appeared clearer and louder than natural."

This patient also did well, the treatment consisting in anti-spasmodics with digitalis, followed by mineral and vegetable tonics.

The third case, given as one of nervous palpitation, appears to us to have been attended with organic disease, relief having been afforded for a time by the remedies employed.

The case which follows next is extracted from the Hospital Reports of La Pitié. After which comes one treated by our author, in which the heart affection depended upon the irritation caused by tape-worm. The history is interesting.

"A young lady, 22 years of age, was affected not only with the ordinary symptoms of tænia, viz. fixed pain in the left hypochondriac region, voracious appetite, restless nights, disturbed dreams, febrile exrcerbations, occasional syncope, and other similar phenomena;

but she suffered, likewise, distressingly from periodic attacks of sympathetic palpitation, accompanied at times by great cerebral excitement—to such a degree, indeed, that she was obliged to pass the night in an upright position, in an easy chair, otherwise she became temporarily delirious—a state which on several occasions threatened to assume a lasting character. The oppression and sense of suffocation she endured during ths more violent paroxysms, were truly distressing, and would have led any one, not conversant with the diagnosis of the organic disease of the heart and lungs, to suspect that something beyond morbid sympathy created the extreme constitutional derangement she suffered. During the paroxysms, the heart, it is true, beat most violently, and with a loud clear sound; the latter, however, proved that the organ was not affected with hypertrophy, for then the sound is generally dull and obscure. The attacks were periodic, and occurred always half an hour or so before the regular hours of repast, and were relieved by repletion. This would scarcely have been the case, had the palpitations depended upon structural disease. The action of the heart was not greater at one part of the præcordial region than at another, nor was the sound louder in any particular situation. The action of the organ was regular, though quicker and more forcible than in a state of health. The entire organ appeared to labour under an increase of irritability, and the consequence was, that every part acted more energetically than it should have done,

The lady whose case I have just related, was treated with daily doses of oil of turpentine, jalap, calomel, colocynth, and other purgatives. The irritation of the system was relieved by the frequent application of leeches to the temples, the employment of refrigerants to the head, and the internal use of anti-spasmodics, such as valerian, castor, camphor, hyoscyamus, and opium, as the varying circumstances of her case demanded; and her restoration was finally completed by a course of vegetable and mineral tonics. During the space of fourteen months, she voided, in separate portions, many yards of tape-worm, varying in length from an inch to upwards of a foot and a half. She is now in the enjoyment of perfect health.

The last case adduced is simply one in which the application of cold to the feet, during menstruation, was followed by a sudden cessation of the discharge, after which palpitation supervened. It presents nothing remarkable.

The general directions given by Dr. Williams, in judging of the nature of the palpitation in any given case, are contained in the following extract:—

"We must ascertain by the hand, ear, and stethoscope, whether the abnormal action of the organ be universal or not, over the whole extent of the precordial region. If it be found on both sides of the heart, and not on one part more than another, it leads to the conclusion that the palpitation is merely a functional disturbance; but this does not constitute positive proof. We must examine, at the same time, by striking over the region of the heart, either by the fingers, or through the medium of the pleximeter, whether the dull sound peculiar to this region be not of greater extent than natural. This induces the conclusion that there is no dilatation, nor effusion into the pericardium."

A Bed-Side Manual of Physical Diagnosis applied to Diseases of the Lungs, Pleuræ, Heart, Vessels, Abdominal Viscera, and Uterus. By Charles Cowan, M.D. Author of the Translation of Louis on "Phthisis." Sherwood. 1836.

This little volume has the unusual recommendation of being precisely what it professes. It gives a concise but clear account of the most important physical signs of disease, as connected with auscultation and percussion. It costs half-a-crown, and will burden no one's pocket. Pupils would do well to have it always with them, in going round their hospitals.

MEDICAL GAZETTE.

Saturday, January 21, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE EPIDEMIC CATARRH.

Two facts connected with the prevalent epidemic must press themselves on the notice of every member of the commu-

nity—the numbers cut off by it, and the severity with which it attacks the old. The daily obituaries in the newspapers are swelled prodigiously beyond their ordinary dimensions, and we question whether even in the cholera times those lists were so heavy. The inference from this, perhaps, is not exactly that the mortality is greater, but that it falls more on people in the upper and middle classes. The cholera raged destructively among the poor, and carried off comparatively few victims from the upper classes; but the epidemic catarrh, in its insidious march, seizes indiscriminately on all sorts of persons, and, while much less formidable in its specific mortality, is found in its results to be little less alarming; for its absolute mortality is made up from a wider range.

We mentioned last week how actively the profession have been employed since the epidemic has prevailed: their activity and full occupation have not diminished since; but in a few weeks, we presume, their services will be less required; the disorder will have subsided and been forgotten.

This is but too frequently the history of epidemics amongst us: while they prevail, they create a sensation; the method of treatment is attended to, but little if any notice is taken of the producing causes, or of the mode by which the community might be protected from future attacks. The essential features of the disorder are not observed in such a manner as that they would be recognized again on a subsequent visit, and so these epidemics come and go, free as air, and making at most but a temporary impression.

Much is lost to medical science by the apathy among those who profess to cultivate it in respect to these matters: there is no concert, no understanding, as to how diseases which widely affect the community are to be observed, — no general inferences are drawn which might promise security to the public health. It is obvious that much good might be effected in the attainment of these ends by the impulse which an able and efficient Government Board could give: but as it is, and proverbial almost as is the jealousy which the medical practitioners of this country have ever entertained of being governed or directed by any Board in authority, nothing can be expected from that source. There is still an alternative in the voluntary union of the members of the profession; and it is with pleasure, mingled with sanguine anticipations, that we recollect it is one of the avowed objects to be pursued by the Provincial and Branch Associations—to gather ample information respecting epidemic disorders, to study their phenomena, ascertain their laws, and to counteract, if possible, their baneful influence. We hope that the opportunity afforded by the present malady, which prevails so extensively throughout the country, will not be lost, and that by the united labour of many, concentrated afterwards by the sound judgment of a few deputed to generalize the results, we may become perfectly acquainted with the causes, characters, and, in short, the laws, of at least one epidemic, which seems likely to visit us often, as it has, no doubt, been with us before.

Were we called upon to point out the character and distinctive features of the prevailing disorder, we should say that its chief peculiarity has consisted in the extent to which the lungs have been implicated, the mucous membrane lining the air-passages being in many cases inflamed, and after a few days overloaded with viscid secretion, interfering with the arterialization of the blood. The oppression of breathing is in many cases urgent, and attended by

great pain along the lower edge of the ribs, and in the epigastrium. The pulse is for the most part soft, and depletions are borne very badly: in those in whom they are carried too far, delirium is apt to supervene. Numerous cases have proved fatal, and post-mortem examination has shewn the membrane lining the air-passages to be inflamed, from the trachea into its minutest ramifications, with condensation of portions of lung, but the pleura suffering comparatively seldom. Even in slighter cases the recovery is tedious, and the patients go grumbling on for many days, with loss of appetite, great languor, and something of ill humour.

The cause of the general seizure is freely talked of as no mystery. It is traced to the change which so suddenly occurred in the atmosphere, from great dryness to great humidity, both states being accompanied with a severe depression of temperature. It was not any remarkable alteration in the degree of temperature that gave rise to the morbid consequences, for we have had scarcely an hour of warm or even temperate weather these six weeks, but the profusion of cold damp moisture with which the air became loaded on the occurrence of the thaw, has been, undoubtedly, a main source of the disorder. There may be, and doubtless are, other qualities in the air which are influential as causes of the prevalent catarrh: yet of these we must, at least for the present, be contented to remain in ignorance; they cannot be apprcciated by any powers of analysis which our chemists or meteorologists possess.

A violent alternation from great cold to comparative heat has sometimes originated an epidemic. One of the most extensive and destructive epidemic catarrhs with which Europe was perhaps ever afflicted, was owing to this cause. It commenced in Russia, in a locality where the thermometer, after standing for some time at — 35° Fah., rose in the course of twelve hours to + 5°, indicating a change of temperature to the amount of *forty* degrees. Forty thousand persons were almost immediately seized with epidemic catarrh.

But what happened on the spread of this very epidemic? It traversed Sweden, Denmark, Upper and Lower Saxony, and other regions farther west, without apparently requiring any similar change of temperature in the places it visited; at least no change in any way remarkable was observed.

That cold weather is peculiarly favourable to the rise and progress of the disorder, we know from statistical facts. M. Andral, in an able sketch of some of the chief epidemics which have prevailed in Europe, states that, of fifty-six catarrhal seizures like the present, twenty-two occurred in winter, twelve in spring, eleven in autumn, and five in summer; while in respect to epidemics of other kinds the case has been very different,—of fifty epidemics of dysentery, for instance, thirty-six prevailed in summer, twelve in autumn, one in spring, and one in winter.

How much the winds, and certain supposed electric states of the air, may have influence, it is exceedingly difficult to say. East and north-east winds have been considered in this country as prejudicial to health, yet they can scarcely be connected with the origin of the present catarrh, for there has been no remarkable prevalence of winds from those quarters. And as to electricity, the inquiry is equally barren of satisfaction. The air changes frequently from a positive to a negative state, without, in the great majority of instances, giving rise to any appreciable result in regard to health. The deficiency of electricity in the air, rather than any surplus of it, would seem to be favourable to the pre-

valence of epidemics; for in those lofty flat regions, far above the level of the sea, electricity is almost wholly absent from the air, and epidemics are common. On the other hand, Volta himself analysed and compared the atmospheres of countries attacked with, and free from, epidemic disease, without being able to find any sort of difference between them.

We have noticed the fact, that in the present epidemic the persons most susceptible to its influence are the elderly: this may be considered as a peculiarity of the disorder, for on other occasions the young and adult have been equally, if not more, exposed. But there is the greatest diversity in this respect: individuals of every age, of every temperament and constitution, are liable to epidemic attacks at different times. Sometimes the feeble are attacked, sometimes the robust. In one of the epidemic catarrhs which was formerly very destructive in this metropolis, persons of a sanguine temperament were its chief victims. Children were spared in the Russian influenza, while the robust and stout were the principal sufferers.

What are the chances in epidemics of this kind? It is very important to observe, that the prognosis of a disease prevailing epidemically is always more serious than when the same disease is met with in a sporadic form: what would in the latter shape be slight, may prove in the former mortal,—in statistical language, the cypher of the mortality is raised. But much must depend on the age of the persons attacked, and their stamina: it is to be recollected, also, that the prognosis varies considerably according to the period of the epidemic. In the onset, or presently after, the danger is greatest; it declines as the visitation approaches its close.

Ozanam, in his History of Epidemics (1817-1823), gives the following as an estimate of the mortality of the principal diseases which attack large numbers of mankind simultaneously:—

Catarrh carries off per cent.	2
Scarlatina	5
Dysentery	from 18 to 40
Croup	30
Typhus fever	60
Puerperal fever	66
Malignant pneumonia	70
Yellow fever	from 75 to 80
Plague	73 to 80

In glancing at this list, however, we must not be deceived: some of the disorders with the lowest cyphers may happen to prove the most destructive; and it is possible that even catarrhal fever, with its low rate of specific mortality, may carry off as great a number of victims as the plague. We do not ourselves rate the specific mortality of epidemic catarrh so low as it is stated in the preceding table; but even if we did, we should still see sufficient reason for apprehension when we consider the vast numbers of persons attacked. The comparatively slight symptoms which mark its invasion, together with the many instances of escape, appear to deprive it in great measure of its terrors: we doubt not, however, that were it possible to obtain a correct return of the number of victims, the contemplation would be not a little appalling.

COLLEGE OF PHYSICIANS.

TRANSLATIONS OF THE PHARMACOPŒIAS.

An advertisement has been going the round of the newspapers and journals for the last month, announcing that a translation of the new Pharmacopœia, from the pen of Mr. Phillips, is forthcoming, and that the College of Physicians will "resist" the publication of any other. Now we have always understood that the copyright of a work did not extend to translations of it; and it is therefore our belief that the College have no power to "resist," as they call it. But if any such exclusive

power did exist, we should like to know why some member of their body was not entrusted with the task of editing the translation? If this be intended as a mode of remunerating Mr. Phillips for his assistance in regard to the chemical manipulations, we must take leave to say it is about the very worst that could have been devised. On former occasions translations of the Pharmacopœia have appeared without the College *resisting;* what, then, in the name of common sense, has induced them at the present moment, and under existing circumstances, to publish such a stupid, illiberal, impolitic, and empty manifesto? We have been told, indeed, that the College have not sanctioned it, and know nothing of it. We sincerely hope that this may prove to be true; but if so, we are again compelled to ask why was it not instantly—(within the first twenty-four hours)—contradicted? Do they think that these are times in which they may quietly repose in apathetic indolence, trusting to character, forsooth, as their safeguard? They have active enemies in every quarter; and if they are not prepared to show a corresponding degree of energy by taking the lead in every measure which is for the general good of the profession, instead of attempting to establish any trumpery monopoly like the present, we would advise them to give up the struggle at once, and resign themselves to their fate with what degree of complacency and gracefulness they may.

SEPARATION OF THE ST. THOMAS'S AND GUY'S HOSPITALS.

This event, to which we alluded last week merely as a probable result of the recent unfortunate occurrences, has actually taken place, as appears from the following resolutions. We think the circumstance is very much to be regretted.

At a General Quarterly Court of Governors of St. Thomas's Hospital, held on Wednesday the 18th instant, the subjoined resolutions of the Committee were confirmed, and passed unanimously:—

Resolved,—That the Committee having taken into consideration the letter received from the physicians and surgeons of this hospital, and having adverted to the recent outrage committed by some of the pupils of Guy's Hospital in the operating theatre of St. Thomas's, are of opinion that the pupils of Guy's should no longer be permitted to attend the surgical practice and operations of St. Thomas's, unless they are also pupils of St. Thomas's.

In coming to this conclusion, the Committee desire to express their regret that the union of the two hospitals, which existed for a long period of time, beneficially alike for the schools of both, and for the public advantage, to the year 1825, should then have been dissolved by the authorities of Guy's, without consultation with, or the consent of, the Governors of this hospital.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

In our report of the proceedings of last meeting (Tuesday, Jan. 10th) we were obliged to omit the following abstract of

Dr. Hume Weatherhead's Paper on Inflammation.

The object of the paper is to illustrate and determine the essential nature of Inflammation, by an analysis of its phenomena, whether symptoms or results, deducing them all as one consecutive series of effects, dependent for their relations on one another.

The author prefaced his remarks by observing that all the phenomena of the living system, both morbid and healthy, owed their origin to nervous influence; that it was the nerves that determined, in the first instance, the rush of blood to a part inflamed; that the increase of temperature, as a symptom of inflammation, was the result of this afflux; that from the same source proceeded, directly and indirectly, the tension and tumefaction, and that the attendant pain had a similar origin.

The *first* effect of an excitant or irritant, he went on to observe, was to attract the blood to the seat of the irritation; but if this effect was kept up beyond a certain period, or carried beyond a certain degree,

while the excitation continued to attract as much blood as before, the power of the capillaries to forward it diminished proportionately with the exhaustion produced by their prolonged over-action. As long as the increase of action in the capillaries was in a ratio with the increased supply of blood, inflammation could not be said to exist; but as soon as the inverse of this took place, by which one became disproportionate to the other, this very circumstance of itself constituted and established that morbid condition we call inflammation.

The author next defined the distinction between this state and congestion. In the former the plethora existed in the capillary arteries, while in the latter, the turgescence had its seat more particularly in the capillary veins.

The paper proceeded to treat of and to exemplify the power of the arteries to determine blood to particular parts independent of the heart, and then deduced the increased temperature of a part inflamed from the difference of capacity for caloric the blood underwent in changing from arterial into venous, and how the release and evolution of the latent caloric which went on in the capillary system, kept up the temperature of the surface in health, and how its inordinate evolution alone made it a morbid symptom as, most conspicuously, as well as conclusively, exemplified in scarlatina.

However, while there existed in the acute stage of inflammation an increased determination of blood to a part, the moment it entered vessels not intended in their natural state to convey red globules, a state of hæmostasis necessarily ensued. From this state of engorgement proceeded an effusion of serosity into the cells of the contiguous cellular membrane in common phlegmon, or into serous cavities, when serous membranes were the seat of inflammation. It was from this circumstance (most manifestly exemplified in certain vesicles, and by the effects of a blister) that the author adduced proofs that pus was nothing else than serosity of a particular quality, which, by a spontaneous change its albumen undergoes, and a partial absorption of its lymph, had been converted into pus — an opinion he sustained by quoting the celebrated experiment of Van Swieten on ulcers, the purulent change which serosity undergoes under our eyes in various exanthematous pustules, how promoters of serous secretion were also promoters of suppuration, and lastly, how strictly pus and serosity were identical in their chemical composition.

The author next took a review of anasarca and its causes, as furnishing additional confirmatory illustrations on the morbid physiology of the capillary system; how both œdema and anasarca invariably proceeded from vascular hæmostasis, and that the former could be produced artificially, as by a ligature; why the fluid effused in these diseases did not change into pus (the deficiency of that which forms the globules of purulent matter, albumen.)

He next explained the pathological formation of an abscess, elucidating his views on the subject by analogy with the change of a vesicle into a bleb — the breaking down of the cellular septa—how that tumefaction was always greatest where cellular membrane most abounded, and was most lax—how serous and fibrous tissues seldom suppurated, and when they did it was always sparingly; and why a common phlegmon should readily suppurate, and a boil should not.

Pain as a consecutive symptom of inflammation next came under notice; and it was shewn that this was mainly attributable to the distended state of the blood-vessels extending or stretching the tissue or structure in which the inflammation was seated; and that, *cæteris paribus*, the pain was always most severe in those tissues that yielded with the greatest difficulty.

Gangrene and sphacelation were next briefly referred to, as results rather than phenomena of inflammation, since both are to be regarded, the one as a partial, the other as a total, extinction of the vital powers of the part—results that may be induced without any previous inflammation.

The paper closed with some detached observations introduced as corollaries, and referred chiefly to serous effusions. The author was inclined to regard the principal function of the cells of the lax cellular membrane as reservoirs spread over the surface of the body, to receive a portion of the circulation when from some morbid cause the blood in the superficial capillaries was stopped or impeded in its course. The splanchnic cavities performed a similar office to the large viscera when obstructed; and the author concluded his observations with narrating an unusual case of ascites from scirrhous liver, in which several of the exhalants opening on its anterior aspect were so enlarged, as readily to admit the end of a probe.

[It has been arranged, as we mentioned in our last, that the discussion of this paper is to take precedence of other business at the next meeting on Tuesday next.]

BRITISH MEDICAL ASSOCIATION.

MEETING AT EXETER HALL.

A MEETING of the medical profession, convened by the new Association, was held at Exeter Hall on Thursday evening last. The weather was extremely unfavourable; notwithstanding which, upwards of a hundred gentlemen were present. Many were unavoidably absent in consequence of the prevailing epidemic. A few minutes after 7 o'clock Dr. WEBSTER, the Chairman, attended by several members of the Council, entered the room, and was loudly greeted.

The CHAIRMAN, in opening the business of the meeting, said that it was convened for the purpose of listening to a statement of the principles and objects of the Association, and of the means by which it was proposed to carry those objects into effect. At a provisional meeting which had been held, it was resolved that the Society should be called THE BRITISH MEDICAL ASSOCIATION; that a council should be formed, and officers appointed; and that a code of laws to regulate the proceedings of the Association should be drawn up, subject to the consideration of a subsequent meeting. The names of the gentlemen who composed the Council would now be read, and the code of laws would be submitted to the meeting.

The names of the Council being read,

The CHAIRMAN proceeded to read an address of some length, for the purpose of explaining more fully the principles and objects of the Association. It first referred to the unsettled state of the medical profession of England, as it regarded the consulting physician, the surgeon, and the general practitioner. Three causes were assigned for that state; first, the neglect of medical affairs by the legislature; secondly, the selfishness and misgovernment of those who ought to encourage medical science, and protect the profession; and thirdly, and chiefly, from the apathy, jealousy, and disunion, existing in the body itself. Various attempts had been made to redress their grievances, but in vain. The burden was, at length, become almost insupportable. Systematic attempts were still made to degrade and lower the respectability and usefulness of medical practitioners; and the cup of endurance had risen to overflowing. The profession was now aroused to a sense of the duty it owed to itself, and the present was regarded as a most fit time to obtain redress. Many divisions and distinctions prevailed which were unnatural and degrading. The interests of the three branches were placed in variance; and one was often accused of infringing on the other's provisions. At the fountain heads, as they were called, of professional honour and dignity, the colleges and corporations, unseemly distinctions prevailed, inconsistent both with what was due to the members themselves, and to the public at large. Those institutions possessed undue powers, and were governed by defective laws. Even if the antiquated charters of Henry VIII. and of James I. also of George III. together with more recent provisions, were duly executed, they would still be totally inadequate to the wants and requirements of the profession, as well as incompatible with the spirit and intelligence of the times. In some cases the powers those institutions possessed had been employed for the purposes of persecution and oppression. The address then referred to the College of Physicians, and complained of the unjust and degrading division of the Fellows and the Licentiates. The first were a sort of aristocratic rank, pluming themselves on their supposed superiority, in having been educated at Oxford or Cambridge, though the fact was, that at those Universities the facilities for acquiring a knowledge of anatomy and medicine, as well as the mode of teaching, were far less than at many other places. The Licentiates, on the other hand, though degraded and insulted, had generally received a thorough education in all the branches; they were nevertheless accounted unworthy of a single post of honour in the College, and were generally excluded from Court and public appointments. Yet, by a recent return to parliament, the whole number of Fellows was 113, of whom 60 resided in London, while the Licentiates amounted to 274, of whom 142 are resident in the metropolis. But the College of Surgeons was still more illiberal, monopolizing, and exclusive. It was governed by a Council of 21, who were self-elected, and continued for life. The members of the commonalty were said to amount to 12,274; yet the bye-laws of the College excluded all members who were general practitioners from having any voice in the election of the Council. Counsellors could only be chosen from among the consulting, or *pure* surgeons, who amounted to about one hundred in London, and nearly the same number in the large towns; but the latter were not eligible. Persons, even among those, if known to be of liberal principles, were passed over, or could only take their seats by turning traitors to their principles, and as the reward of their apostacy. Then as to the Company of Apothecaries: what monstrous and absurd powers had

been granted to that trading company!—powers which were almost thrust upon them by the jealousies and impolicy of the Colleges of Surgeons and Physicians;—powers at which they themselves were greatly surprised;—powers of which they ought long ago to have been deprived. There were, it was true, some distinguished and amiable men in all those bodies, but in their corporate capacities were exhibited the natural and unfortunate effects of irresponsible powers, and the rottenness of the whole system, at present, of medical policy.

The address then referred to the changes which might be produced by the introduction of wholesome laws—by institutions properly elected and duly responsible—by due encouragement to real talent, &c. There would then be no exclusive teachers—no favourite schools, apart from real skill—the great hospitals would be purified from misgovernment and nepotism; there would be legal competition; honours and dignities would be accessible to all who deserved them; unqualified and illegal practitioners would be restrained; quackery would be put down, or greatly diminished; chemists and druggists would be duly registered, and not allowed to practise or prescribe. Then no poor-law commissioners, or their deputies, would be able to control a class of gentlemen, or introduce their pretended self-supporting clubs, or advertise for parochial surgeons, or for attending on the poor by tender. For the attainment of such objects the Association was formed, and now sought the co-operation of the whole profession. It was not intended to assume a literary or scientific character—that was deemed unnecessary; its intention was to confine itself chiefly to what was called the business of the profession. Its central situation, its contiguity to parliament, its vicinity to the Colleges, &c. rendered it remarkably adapted to that purpose. Meanwhile they wished to encourage the formation of Provincial Associations, who might contribute the requisite funds, collect evidence and information as to the existing evils, watch the workings of the Poor-Law Commissioners' schemes, forward petitions to parliament, &c. &c. The present period was remarkably favourable to such a union of liberal-minded men. The legislature and the government seemed quite willing to interfere. They had lately afforded assistance to a highly-talented member of the profession, who was also a member of the House of Commons (Mr. Wakley), in obtaining the Medical Witness Bill; and further assistance was promised him by Lord John Russell, in the formation of a committee for inquiring as to the medical relief afforded to the poor in the Unions. The great principle had also been acknowledged in the new charter of the London University, that degrees could be conferred in the metropolis, and without reference to any religious opinions or distinctions.

The address then adverted to two provisions made in the code of laws; the first of which was the appointment of a Court of Honour, for the adjustment of any misunderstandings between members of the profession; and secondly, the formation of a benevolent fund, for the assistance of decayed members of the profession, and their widows and orphans. The address concluded by an urgent recommendation of the principles and objects of the Association, and a call upon all present for vigorous and persevering co operation.

Mr. Eales, the Secretary, then read the laws and regulations of the Association.

Mr. Powell proposed a resolution, to the effect that the meeting cordially approved of the objects and intentions of the Association; that it approved also of the code of laws which had been read, and recommended their adoption; and that the address delivered by the chairman be printed and distributed among members of the profession. He lamented that any jealousy or disunion should prevail amongst members of the medical profession, as that was one cause why their injuries had been so long perpetuated. They were not behind the professors of law, or of theology, in their aims to benefit their fellow men, and yet there was no body of men so generally disregarded. The fault he believed to be altogether their own. They had not stood before the public in their just position; they had been estimated as a set of tradesmen; and, though they laboured hard, they often lived poor and died in want. He was anxious they should assume their proper station. Efforts had sometimes been made, but, because of some pecuniary loss, individuals had been discouraged, and their privileges were not obtained. He sincerely wished that invidious distinctions were at an end, and that regard was had to talent, irrespective of minor considerations. Where there was real talent, it would be found out by the public, and they would patronize it. He adverted to some of the provisions made by the code of laws, and expressed his earnest expectation that, by unity of effort, they should succeed, however small their beginnings, to accomplish all they wished.

Mr. Hooper dwelt on the importance of the Benevolent Fund, and lamented that the medical profession should be so far behind some of the most ordinary trades. He also adverted to the protection which they needed against unjust

prosecutions. Some might say, "Apply to the College of Surgeons to assist you;" but he believed that he might as well apply to St. Paul's Church Yard. He seconded the resolution with much pleasure.

Dr. MURRAY, of Lincoln's Inn, had been induced to desert the profession, because of the difficulties which lay in the road to eminence—because empirics and quacks had been allowed to practise with impunity—and because, in the corporate bodies, a system of exclusion and nepotism prevailed, by which persevering talent was often excluded from dignity and honour. That state of things had arisen out of the want of union in the profession, and from the want of proper laws to punish mere pretenders, and to protect men of real talent. The proposed Court of Honour would have very little to do if such an Association prospered. The profession would not then be subjected to insult from deputies and subalterns of poor-law commissioners, nor be treated as though they were errand boys to the poor. Then the quack, on one side, would not be able to thrust his drastic pill by hundreds down the throats of his wretched patients, nor would a fashionable quack, on the other hand, stand by the couch of expiring mortality prescribing the decillionth of chamomella. Had such an Association been formed some time ago, he should not have abandoned the profession of medicine for a profession which was far more arduous, but which presented no barrier to persevering industry. He wished to know whether one object of the Association would be to obtain a consolidation of the various laws in reference to the profession.

The CHAIRMAN, in reply, stated that such an object would be desirable, as well as the obtaining of new laws which should embrace the whole profession. He thought the profession might be divided into two general classes—the general practitioners, and the consulting practitioners.

Dr. J. JOHNSON agreed that talent ought to form the only distinction in the profession; but he thought that as such objections were urged against the College of Surgeons because they excluded general practitioners from their Council, it was equally objectionable on the part of the Association to exclude surgeons and physicians from its Council. Such exclusions were neither liberal nor politic, and though he was not personally affected by them, he could not but think it would be best that talent should be the qualification, irrespective of the particular line of practice.

The CHAIRMAN intimated that such an alteration ought to be introduced, if the Council saw fit, as he wished the Association to be placed on the broadest basis. He should wish it to preserve the character of a representative society.

Dr. A. T. THOMSON thought they had not acted wisely to set out by vilifying any individual or corporate bodies. He was not prepared to oppose the formation of the Association, nor was he prepared to go the length of what had been stated in the address. He could not thus join to vilify public bodies.

The CHAIRMAN wished to know what body had been vilified.

Dr. THOMSON referred to what had been said about the Colleges. The Association ought to have been one of inquiry, and not of censure. Such inquiry might be productive of much good. Let not the Association plunge at once into a radical reform which can only do injury. He would fain become a member of the Association, but he could not support that portion of the address, and should be very sorry to see it published.

Mr. POWELL replied that inquiry was altogether unnecessary where abuses were so palpable. They might proceed in a namby-pamby course of inquiry, asking the corporate bodies to assist them — currying favour with the men who had been trampling upon them for twenty years. The abuses were well known, and he would have them seek relief where alone it could be rationally hoped for—namely, from the legislature of the country.

The CHAIRMAN disclaimed all intention to vilify any individuals or body of men, and deprecated all new inquiry, as altogether unnecessary.

Mr. BODY said that he had seceded from the Association on the very ground taken by Dr. Johnson. The address was most pleasing and delightful with that exception. He wished all distinctions to be done away with, he hated them, though he loved the men who bore them. The *dubs* would fain make them appear little men, that they might stride over them as so many Colossuses.

Mr. LUCAS contended that as pure surgeons laboured under grievances in common with general practitioners, the latter ought not to act so ungenerously to the former as to exclude them from this Association, and thereby aid in preventing them from obtaining redress.

Mr. WEBB said that he read the advertisements by which the present assembly was convened, and he determined upon appearing amongst them, and joining the Association. He had, however, been much displeased with the address which had been read, and had resolved to give a silent vote against it. Observations had since been made which had led him to the conclusion that it ought not to appear before the public that the general

practitioners unanimously concurred in the remarks which had been made against the three corporate bodies. The chairman had asked what those corporations had done for the profession; in reply to which he (Mr. W.) would simply answer, that to them they were indebted for nearly the whole of the medical literature which they possessed.

Mr. MEADE, in reply to Dr. Thomson's observations, contended that if they wanted reform in the medical profession, they must not have recourse to milk-and water speeches regarding the Colleges. If they went before those institutions cringing, they would be spurned from their doors. No spirit should induce the general practitioners to dissever themselves. The Colleges of Physicians and Surgeons could not withstand the united exertions of the medical profession. They had too long borne the oppressive measures of those chartered bodies. The Society of Apothecaries had opposed the most beneficial measures, and had done but little to raise the profession in the estimation of the public. They did not protect medical men from quacks,—on the contrary, they had shewn a disposition to prosecute members of the College rather than those who had no diploma whatever. He was sure that the address was sufficiently mild, and though he had listened to it with great attention, he had not heard any terms which could be construed into vilification. He was sure that on subsequent reflection Dr. Thomson would come to the conclusion that the terms which he (Dr. T.) had employed were unjustly severe. He trusted that this Association would go on and prosper.

Mr. LUCAS was desirous of knowing whether it was competent to an individual to offer a motion with regard to the rules.

The CHAIRMAN replied in the negative. They must remain unaltered till the meeting in March. He could assure Dr. Thomson that the address had not been drawn up in a hostile spirit. It was of no use to make inquiries: they knew that grievances did exist. What boon had the Society of Apothecaries conferred on the profession? Did they hear of the Society prosecuting a quack, or adopting any other measures calculated to promote the interests of the profession? With respect to the College of Surgeons, it had opposed the very act which had been lauded by Dr. Thomson — the Apothecaries' Act. It was disgraceful to place such power in a trading body: it ought to have been invested in the hands of those who were neither surgeons nor physicians. Had the power been conferred on stone-masons, they might have appointed proper examiners, and the profession would have derived an equal amount of benefit. It was not intended that such powers should fall on the Society of Apothecaries; and Dr. Burrows had stated, in his parliamentary evidence, that it was not prepared to receive them. There was so much illiberality in the body, that Dr. Burrows was obliged to withdraw himself from them. He was sorry to be compelled to make these remarks; but having grievances of which to complain, they would be fools if they did not seek their redress.

Dr. THOMSON felt called upon to state, that he had been very greatly misunderstood. He had stated that he had no objection to the Association; so far from it, he had attended the meeting with a view of supporting it, but he did not anticipate hearing the language which the address contained. It was his decided opinion that the mode of gaining the object which the Association had in view, was not that of couching their sentiments in strong terms; they ought to speak sincerely, but calmly. The language of the address would be injurious to the Association; he regretted it deeply, because he was anxious for the prosperity of the Association. It had been loosely stated that nothing but talent ought to regulate the opinion of the public; but the public had not shewn themselves accurate discriminators, and could not judge of the qualifications of medical practitioners without the aid of some other test than their own. He conceived that different ranks were still necessary in the profession.

The CHAIRMAN suggested that that question had not been mooted, and that talent was not sufficient for a medical man without proper qualifications.

Dr. THOMSON resumed: But who were to give them those qualifications? It was now vested in the three corporate bodies. He thought that the Society of Apothecaries had been unhandsomely treated; it had taken general practitioners from the low state in which they formerly stood, and made them scientific men. Dr. Thomson then contended that the medical profession had failed to reform itself, and that it was only in consequence of the present legal obligations to attain a certain degree of education, that general practitioners were better qualified than formerly. He admired the Association, and hoped that the assembly would speak of their grievances like sober-minded men.

Mr. CRISP argued, that if the public were unable to discern men of talent, they must be enlightened upon the subject.

The CHAIRMAN admitted that a great deal of good had been done by the Apo-

thecaries' Act, but it was procured from the legislature by general practitioners themselves. He hoped that they would soon have one faculty of medicine existing in this country, having equal powers. It was the system of favouritism which had frequently prevented men of talent from succeeding in their profession. It was very rare for a Licentiate of the College of Physians to become a court physician.

The resolution was then submitted to the meeting, and carried almost unanimously.

The CHAIRMAN hoped that Dr. Thomson would favour the Association with the aid of his talents.

Dr. THOMSON again expressed himself as friendly to the Association, but not to the address.

The CHAIRMAN, in reply to a question addressed to him by Mr. Glass, one of the pupils at the London University, stated that he saw no objection to pupils joining the Association.

Dr. HULL then moved a vote of thanks to the Chairman, which was carried by acclamation.

The CHAIRMAN briefly acknowledged the compliment, and the meeting separated.

OBSERVATIONS ON MR. SEARLE'S VIEWS RESPECTING THE TREATMENT OF INFLAMMATION.

To the Editor of the Medical Gazette.

SIR,

As Mr. Searle, of Kennington, has published a reply in your journal, to the observations which I some time ago made upon a paper of his, and as he seems to think I have acted disingenuously towards him, I beg that you will do me the favour to make room in your next number for the following rejoinder:—

Mr. Searle commences his reply, by saying that I have assumed a name which does not belong to me; that my proper name is "Conservative," because I complain "that long-cherished medical theories and modes of practice are (being) abandoned:" and surely, if I am on that account to be so denominated, I may take the liberty to retort, and to call Mr. Searle a "Radical," because he wishes, with the besom of destruction, to sweep away "theories and works of practice," which experience has led the members of the profession to cherish, and to *raise* in their stead "new-fangled doctrines." After bestowing upon me the appellation of Conservative, a name to which I certainly have no kind of objection, he says, that while charging him with inconsistency I do not perceive my own; that I have opposed my "mere words of the moment to facts which have required many years to collect and investigate;" and then, in an indirect manner, endeavours to show that I have raised prejudices against Mr. Radley's method of treating fractured bones, *merely* because it was *new* to me; but I beg to observe, that if Mr. Searle will read the papers which I have published on that subject, in your Journal, he will perceive that I have adduced *reasons* in support of my objections to Mr. Radley's practice, and, therefore, that I have not opposed that gentleman's mode of treating fractured bones, *merely* because it was *new* to me.

Mr. Searle then goes on to homœopathy, and observes, that I should have been much more like a true investigator, if, before denouncing that method of treating diseases as a "mania," I had first made trial of it; which is just as much as to say, that no one should presume to laugh at any medical novelty, however absurd it may appear to be, without first trying it. But how is homœopathy to be tried? Certainly not in mild, trifling complaints, because, in such cases, nature would often perform the cures, and homœopathy receive the credit. And I beg to observe, that the man who, in the case of a dangerous disease, did nothing more than prescribe a few ("billionth part of a grain") doses of common sulphur, or of any other kind of medicine, in order that he might give homœopathy a trial, would probably soon find, by the fate of his patients, that he had committed an error, the recollection of which, unless his conscience happened to be "seared as with a hot iron," would imbitter many of the moments of his future life.

Homœopathy is not quite so innocent in its nature as some persons imagine it to be. It is true that the exceedingly small doses of medicine which are given cannot possibly of themselves do harm, but the time which must necessarily be spent in administering them, and in waiting for their effects, when other and more rational means ought, at the first, to have been had recourse to, cannot be recalled. I therefore, notwithstanding Mr. Searle's opinion upon this point, do consider that a "*true investigator*," without first making experiments according to the infinitessimal system, may safely venture to call any thing which is so obviously absurd as homœopathy a "mania."

Mr. Searle next proceeds to what he calls his own "mania," and complains that, by making too short a quotation from his paper, I have made it appear to be his

practice, in the treatment of inflammatory diseases, to give food freely with one hand, and tartarized antimony with the other. He says, that tartarized antimony is so far from being a favourite remedy of his, that he has not recommended it to be taken internally, above ten times, within the last six years; and that he placed it at the head of a list of sedatives, because it is most frequently employed by the profession, and because he wished to make considerable strictures upon its use. But how could I, by reading the paper which he published in the Lancet, know that this was his intention? In that paper he does not, as far as I can see, even hint at any thing like a want of affection for tartarized antimony, excepting in cases where the arterial action is very high and strong; on the contrary, he never fails to name it first whenever he has occasion to recommend sedatives; even in the very quotation respecting which he thinks that I have dealt unfairly with him, he uses the following words:—"If considerable pyrexia attend subacute inflammation, it is evident that the predisposing cause, excitability, is greater than the exciting cause, inflammation. Under these circumstances, febrifuge medicines, especially those of a sedative nature, as *tartarized antimony*, digitalis, &c. will, in general,' produce a beneficial effect." Now, if Mr. Searle does not, by this language, mean to recommend tartarized antimony, what does he mean? But he says, let it be supposed that the &c. in the above quotation (which it appears I overlooked in my remarks upon his paper) had been really omitted by him, and that he had intended to recommend tartarized antimony only, (no matter whether he intended to recommend that medicine only or along with other things, he certainly did recommend it) that its use is restricted to cases in which considerable pyrexia attends subacute inflammation; that the patients who are subject to this form of pyrexia are either very young children, or persons of very delicate constitutions, who habitually take but little food, and who, when ill, manifest, in general, an insuperable aversion to it; that to children tartarized antimony is never given, nor even thought of; and therefore that there can be no inconsistency in giving that remedy, with the one hand, to very delicate persons, who have an aversion to food, because, as they cannot take nourishment, it is impossible to feed them freely with the other. Now all this appears to me to be merely an attempt to get out of a difficulty through a loop-hole. But, admitting that the above explanation really did remove the inconsistency which Mr. Searle says I have disingenuously laid to his charge, the practice, even then, is inconsistent, because it is in direct opposition to the "new-fangled" doctrine, which it is Mr. Searle's object to support.

But Mr. Searle does not, in every part of the paper which he has published in the Lancet, restrict the use of tartarized antimony to cases in which considerable pyrexia attends subacute inflammation, or, in other words, to very delicate persons, who cannot take food, as the following quotation from that paper will show:—

"The most direct method of removing inflammation is suggested by observing the manner in which it was produced. For instance, if a local phlegmasia be brought on by excitement of the general circulation, the use of an agent which, like *tartarized antimony*, depresses the general circulation, is the most direct method of counteracting the agency of the cause, and, as it were, of undoing the disease." Here there is no restriction to the use of tartarized antimony. No, the treatment is to be conducted, not according to the kind of inflammation, but according to its cause; and, therefore, although a patient may not be very delicate and weak, but on the contrary, strong and robust, if the disease under which he labours has been brought on by excitement of the general circulation, he is to be lowered by means of tartarized antimony; and I must observe, that the precepts of the "new-fangled doctrine," as far as regards the diet, are either, at the same time, to be followed or not. If they are not to be followed, the treatment is purely lowering. It is *antiphlogistic*; it is the very treatment which, if Mr. Searle means any thing by what he writes, it is his avowed object to oppose; and if they are to be followed, that is to say, if milk, beer, wine and water, eggs, or good broth, are at the same time to be "fearlessly administered," then the inconsistency, which he says I have disingenuously laid to his charge, becomes glaringly conspicuous. He must, therefore, either admit that he recommends, at one time, a practice which, at another, he condemns, or that I have not, after all, dealt unfairly with him, by making it appear to be his practice, in the treatment of inflammatory diseases, to give food freely with the one hand, and tartarized antimony with the other.

But, after reading the paper which Mr. Searle has published in the Lancet, from the beginning to the end, it will, I think, be very difficult for any one clearly to understand what, upon the whole, he really does mean. In one part of that paper he says, that "very high and strong arterial action cannot be controlled by sedative medicines, as tartarized antimony and digitalis; for

small doses of these medicines have no effect, while large doses occasion vomitings, which are often distressing and injurious to inflamed organs; and, unless they produce a uniform sedative effect, they are pernicious, as temporary depression of the circulation induces reaction, and thus defeats the object to be attained, and to nauseate the stomach, without subduing the disease, is worse than useless, as it renders the patient incapable of taking that *nutriment* which, *of itself alone*, would, "according to Mr. Searle's views, tend to diminish the pyrexia." But if nutriment, in a case of this kind, be all that is required, why speak of sedatives at all. It is not a sedative effect that is wished for, even if it could be produced. No; very high and arterial action is not, according to Mr. Searle's views, to be lowered; on the contrary, it is to be *increased* by nutriment, which, if "judiciously and fearlessly administered," will of itself alone tend to subdue the disease. Now this, it must be admitted, is strictly in accordance with the "new-fangled doctrine;" indeed, it is the new-fangled doctrine itself; but does it agree with the practice, which, as has been shown, Mr. Searle, in another part of the same paper, recommends, of giving tartarized antimony, with the view of "undoing the disease," by *lowering* increased arterial action? Let those who have read Mr. Searle's paper, and who clearly understand what, upon the whole, he really does mean, give the answer.

In this way I might go on, making quotations and animadversions upon them: but it is not necessary that I should do so, because the new-fangled doctrine and my remarks upon it are already before the members of the profession, who, of course, will judge of both for themselves. I shall therefore conclude, by saying, that although a staunch conservative, I am not hostile to what may be called the PHLOGISTIC plan of treating inflammatory diseases, because it is new; on the contrary, if it should so happen that I shall at some future period of my life, according to Mr. Searle's prediction, become convinced of the soundness of his views, I beg to assure him that I shall then, instead of indulging in disingenuous observations, at once abandon "my long-cherished" mode of practice, become his follower, and support, with zeal, the "new-fangled doctrine."'—I have the honour to be, sir,

Your most obedient servant,

INVESTIGATOR.

Jan. 16, 1837.

MARYLEBONE SELF-SUPPORTING DISPENSARY.

DR. COPLAND'S RESIGNATION.

To the Editor of the Medical Gazette.

SIR,

YOUR number of the 7th instant contains a letter, signed "W. Eales," on the subject of self-supporting dispensaries. In this letter there is the following passage: "Dr. James Copland was the consulting physician of the present Marylebone Dispensary, and I have been authorized by him to tell my friends that he was compelled to withdraw his name from the institution in consequence of finding that really poor persons did not come to it, but that the patients were such as ought and could well afford to pay their medical men."—P. 558.

This statement is so contrary to fact, and contains such a serious charge of departure from the principles of the North West London Self-supporting Dispensary, that I have been directed by the Committee directly to contradict it.

Dr. Copland's letter of resignation states as his reason for that step, simply that his engagements prevent him from performing satisfactorily to himself the duties which devolve upon consulting physician to the Institution. In a letter written by Dr. Copland a few days since to one of the medical officers, he states, "as to the expression quoted by Mr. Eales, I could not have made use of that, inasmuch as I do not know, neither have I had an opportunity of knowing, whether the patients of the Self-supporting Dispensary are able or not to pay a medical man;" and although in this letter Dr. Copland expresses his belief that this and other kinds of medical charities are open to abuse, he admits that he has not seen any *one instance* during his connexion with the North West London Self-supporting Dispensary.

The rules of our Institution expressly declare that no person who shall appear to the Committee able to pay a medical attendant in the usual way, shall be admitted to the benefits of the Institution; *many* are refused on this account, as the *means*, *condition*, &c. of the applicants are investigated by a committee, before they are entered.

Further, whenever it is discovered that the means of a benefitted subscriber are beyond the limits of a scale fixed by the Committee, the name of that individual is erased from the books. Several instances of this kind have occurred; and the Committee will be always thankful to receive such information respecting the means of any of the subscribers as shall prevent any

abuse of the Institution, and may thus preclude it from interfering with the private practice of medical men. Those who now degrade themselves by publishing unfounded charges and gross misrepresentations of fact, should apply their attention to the actual working of the Institution; they would witness the benefits which it confers on the class relieved, and the honourable position in which it places medical practitioners; and if they should discover any instances of misapplication of the benefits of the Institution, by pointing them out, they would really do somewhat to increase its utility, and serve the interests of the medical profession.

Trusting that the same benevolent and candid disposition with which you have examined into the principles of Self-supporting Dispensaries will prompt you to insert in your next number this letter, in defence of the first institution of the kind successfully established in London,

I have the honour to be, sir,
Your obedient servant,
JOSEPH HUNT, *Secretary.*

N. W. L. Self-supporting Dispensary,
40, Manchester-St. Jan. 18, 1837.

SOCIETY OF APOTHECARIES AND THE NEW UNIVERSITY.

To the Editor of the Medical Gazette.

SIR,

IN your last publication but one, Scrutator lays it down as a positive rule that, because a gentleman does not apply for a mandamus, or to the Court of Assistants, in case he considers himself unjustly rejected, he must be conscious that he could not stand the test of a fair examination. In my opinion, sir, he jumps much too quickly to a conclusion. In the first place, there is a very general impression that the money which is to be paid on such a demand, is thrown away, inasmuch as the candidate is certain of a second rejection, with (of course) double disgrace. In the next place, human nature is not always composed of such tough material as to embolden a person to face the Court of Examiners with an exclamation such as this—"I am not afraid of any questions you may put to me, feeling assured that I cannot in justice be rejected." And where is the mind so comprehensive that does not shrink from an examination in the minutiæ of all the sciences with which students are expected to be conversant?—not that I mean for it to be understood that the Examiners expect a very intimate knowledge of all the sciences; but I would ask any one to appeal to his own feelings, and say whether he would like to challenge such a body of men, who, taken collectively, no doubt, are well versed in all the subjects of the examination? Scrutator also asserts that the University cannot in any way injure the cause of the Court of Apothecaries. Again, I think he is in error. I do not say it *will* injure them, for, on the one hand, there may be a reform in the Company, where it is needed. (and is there any public Institution that can be in such good humour with itself as to flatter itself with the idea that it needs no reform?) and on the other, the University may not in any way excel—but should it rise like a beacon to the medical world, as perfect as an institution of this kind can be, having profited by the errors of its rival, then, I think, no one will deny but that it may injure the business in Blackfriars. I have much admired, sir, the temperate manner in which you have treated this subject throughout, and I consider you are not less a friend to the interests of the students, because you do not rant and rave as if you had some great private interest in the matter. The longer I live, the more I am convinced that nothing of any real importance can be accomplished by such a course.

Your giving this insertion in your next, will gratify an admirer and constant reader,

JUSTITIA.

Plymouth, Jan. 17, 1837.

UNIVERSITY COLLEGE AND HOSPITAL.

DR. A. T. THOMSON.

To the Editor of the Medical Gazette.

SIR,

IT is, as you are I am sure aware, utterly impossible that any system of education can be perfect, or even beneficial to those engaged in its acquirement, unless a definite understanding exists between the teacher and those taught, as regards the period and manner of conveying instruction. An absence of this understanding, or, more properly, an unwillingness, on the part of one of the physicians of the North London Hospital, to fulfil his necessary and mutual compact, (for such it assuredly is,) exists in the person of Dr. Anthony Todd Thomson.

From the foundation of the hospital it has been declared, that clinical instruction *and lectures* would be *regularly* given both by physicians and surgeons; and, indeed, if we except that individual whose culpable negligence has called forth this public exposure, that pledge has been honestly and faithfully performed. But to continue, and to state the grounds on which Dr. A. T. Thomson is now brought before your notice—Is not his absence from the Hospital, during the days he should visit his patients, not an occasional but con-

stant occurrence? Is not the hour specified in the prospectuses as the period he goes round the wards, invariably passed before he makes his appearance at the Hospital door? And lastly, do not weeks constantly elapse without his delivering a clinical lecture, or even making a clinical remark in his passage around the wards? These questions, which must all be answered in the affirmative, require, indeed, no comment on my part; they may, however, not inaptly be placed as a set-off to those cases occurring, or *said* to occur, at other hospitals, by a cotemporary famed for his impartiality (?) but who at least shall be nameless.

I may, perhaps, shortly have occasion again to intrude upon your notice—not, I anticipate, as regards the hospital, but with some strictures on a portion of the medical department of the adjoining college. In reference to the chair of materia medica, assuredly there exists a something which, unless speedily removed, must soon effect such a change — revolution, shall I say?—as, in all possibility, will re-act in such a manner as to place the long continuance of that building, as a medical school, in perhaps the most precarious situation.

If, among the abundance of communications with which your journal weekly teems, the present can possibly find admittance, you will confer a favour on your obedient servant, and constant reader,

OBSERVER.

January 20, 1837.

[The writer has authenticated his letter.—ED. GAZ.]

NOTE FROM DR. HARGRAVE, OF DUBLIN.

To the Editor of the Medical Gazette.

SIR,

IN the London Med. and Surg. Journal, of the 31st ult. there is an article headed "News from Dublin:" being informed that it is attributed to me, I beg through the medium of the MEDICAL GAZETTE to state, that neither directly nor indirectly did I ever contribute any information whatever to that or any other journal, relative to the subject of the above communication.

To Drs. Graves and Stokes, and Mr. M. Collis, of the Meath Hospital, I am under deep and lasting obligations for the honourable and disinterested support given to me in the late election to fill the surgical vacancy in that institution.

I am, sir,
Your obedient servant,
W. HARGRAVE, M.B.

York-Street, Dublin,
Jan. 14, 1837.

TREATMENT OF INTESTINAL FISTULÆ.

THE success attending the employment of the hot iron in the cure of artificial anus, already recommended by Dieffenbach, is confirmed by two cases related by Dr. Fingerhuth.

In both, abdominal inflammation, caused by violent blows, had been followed by external abscess, to which succeeded discharge of fæcal matters. Various cauteries were employed to destroy the membranes lining the fistulæ, and to convert them into granulating surfaces, but without producing their complete obliteration. The fistulous openings, although somewhat diminished by imperfect granulations, showed no tendency to become closed. Cauterization was then adopted by means of an iron, corresponding in diameter to that of the fistulæ, and the temperature of which was scarcely elevated to that of red heat. Luxuriant granulations soon covered the cauterized parts, the fistulæ diminished, and the surfaces being again destroyed by a heated iron corresponding in size to the apertures which remained, they were eventually cured. — *Woch. für die ges. Heilk. Dublin Journal*, Jan. 1837.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 17, 1837.

Abscess	3	Inflammation	37
Age and Debility	75	Bowels & Stomach	5
Apoplexy	8	Brain	1
Asthma	54	Lungs and Pleura	20
Cancer	2	Influenza	13
Childbirth	5	Insanity	4
Consumption	84	Jaundice	3
Convulsions	30	Liver, diseased	5
Croup	1	Measles	7
Diarrhœa	3	Mortification	2
Dropsy	22	Paralysis	2
Dropsy in the Brain	9	Rheumatism	1
Erysipelas	2	Small-pox	1
Fever	18	Thrush	2
Fever, Scarlet	6	Tumor	1
Gout	3	Unknown Causes	29
Heart, diseased	3		
Hernia	1	Casualties	6
Hooping Cough	9		

Increase of Burials, as compared with the preceding week . . 193

METEOROLOGICAL JOURNAL.

Jan. 1837.	THERMOMETER.		BAROMETER.	
Thursday . 12	from 19 to 36		30·06 to 29 65	
Friday . . 13	29	49	29·44	29·53
Saturday . 14	30	39	29·82	30·10
Sunday . . 15	26	38	30·25	30·28
Monday . . 16	25	37	30·20	30·20
Tuesday . . 17	31	43	30·19	30·17
Wednesday 18	33	39	30·08	30.01

Winds N. and N.W.

Except the 14th and 15th, generally cloudy; rain on the 13th, 16th, and 17th; snow on the afternoon of the 12th.

Rain fallen, ·425 of an inch.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 28, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XVIII.

Premature and Retarded Births—*Occasions of inquiry respecting such births, in civil and criminal cases—Law of Legitimacy—Provisions of the Civil law—Ecclesiastical law—English law of legitimacy traced from the earliest period—Decisions in the English courts—French and Prussian law—Question of Prematurity—Grounds for medico-legal decision—Question of Retardation—Analogy in favour of the occurrence—Facts and cases in confirmation — Vagueness of the testimony in favour of a fixed limit—Conclusion of the argument—Peculiarities of the Gardner peerage case—Supplemental note.*

Another view which we have to take of the births of children, is as they may be premature or retarded.

PREMATURE AND RETARDED BIRTHS.

Occasions of inquiry: 1. *Prematurity.*—The question of prematurity of birth may be raised in civil or criminal cases. A woman who has been married, perhaps no more than six or seven months, brings forth a child which appears to have attained its full uterine development; if this prove to be the case, upon a proper inspection by competent medical authority, the birth is premature and illegitimate.

Again, a woman is charged with concealment of the birth, and the presumption of her guilt is strengthened by the fact of her having made no preparation for her delivery; if it can be proved that the birth was premature — that labour came on unexpectedly, at the seventh or eighth month—it will constitute a strong ground of defence; but such proof must be made out by medical evidence.

It is scarcely necessary to remind you of the remark I made in a former lecture, that premature births are not to be confounded with immature; the latter having reference solely to the condition of the fœtus as to its development, while the former always implies that the infant has been born before the regular period, or the time usually allotted to a natural and lawful birth.

2. *Retardation.*—With respect to retardation, a woman may bring forth a child ten, eleven, or twelve months after her husband has died, or been separated from her. Is the offspring to be considered legitimate? In other words, are we to admit the plea of gestation having been protracted through grief, and depressing passions, or, indeed, through natural causes, where none of the former can be alleged?

How wide a field is opened for medico-legal inquiry, in the mooting of these questions, must be obvious; nor can it be less evident how much the tranquillity and honour of families depend upon the issue, as well as the reputation, and perhaps the safety, of individuals.

As the question of legitimate or illegitimate birth is closely connected with those of prematurity and retardation, we cannot proceed in a more orderly manner than in giving, previously to the discussion of the latter questions, a general account of the

Law of Legitimacy.

Civil law.—Our earliest arrangements for the legal determination of legitimacy were borrowed from the Roman law. "Pater is est quem nuptiæ demonstrant" was the comprehensive dictum of the Digest. But the demonstration of paternity created by marriage appears to have been only pre-

sumptive; for it was liable to be defeated upon proof of the husband's impotency or non-access.

One of the presumptions of non-access, or the absence of sexual intercourse between the husband and wife, was the abnormal duration of pregnancy. The period of gestation was very early fixed by the Romans. The Decemvirs determined that ten months constituted the utmost limits to which it could be protracted; and Justinian enacted that the child of a widow born in the eleventh month after her husband's decease, was illegitimate. It is further stated in the Digest, upon the authority of Hippocrates, that the period of gestation could not be *less* than seven months.

When the birth occurred between the seventh month and the eleventh month — that is, within the legitimate period—it was still allowable to dispute the legitimacy on the ground of non-access; evidence might be brought forward to disprove the occurrence of sexual intercourse between the husband and wife; but it was requisite that it should be very conclusive. Proof of the mother's adultery was not allowed to bastardize the child, as her guilt and his legitimacy were not inconsistent. Nor did the declaration of the husband or the wife against the legitimacy of the child, determine its bastardy. The fact was to be made out in the manner declared by law—namely, by proving impotence or non-access.

Ecclesiastical law.—The Canon law established a ground of legitimacy more definite, though not perhaps more easy of proof, than that just stated. In the Decretals the doctrine of access is overlooked, and the paternity of the child is made to depend on the answer to the question — by whom the mother conceived? Whether she resided with her husband or the adulterer, the child was illegitimate, if it could be proved to have been begotten in adultery. All circumstantial evidence that could possibly elucidate the fact, even the resemblance of the child to the adulterer or the husband, was admissible. The spirit of the Canon law would, indeed, almost seem to give the preference to the presumption of illegitimacy over that of the opposite state.

English law.—Neither the civil nor the canon law have ever expressly formed part of the law of England; though they have unquestionably had great influence in establishing principles for us, and in guiding the dictates of our earliest authorities.

Bracton, our oldest common law writer, expresses his definition of legitimacy almost in the very words of the Digest: "Legitimus hæres et filius est, quem nuptiæ demonstrant esse legitimum." But the exceptions which he admits to this fundamental presumption have more latitude than either the civilians or churchmen allowed: they are these four—1, the impotence of the husband; 2, the absence of sexual intercourse at the date of the wife's conception; 3, the non-recognition of the child by the father; and, 4, any conclusive presumption arising from physical or moral causes that the child is the child of the adulterer.

The second ground of exception, it should be mentioned, is left in considerable obscurity: where the question could be raised, the result would depend on the period assigned for the duration of gestation; and the only notice of this important point in Bracton, is to be found in his account of the writ *de ventre inspiciendo.* When this writ was followed by a verdict of pregnancy, the female was placed in safe custody until the truth of the fact could be ascertained, or rather until there was no possibility of any future fruit of her alleged intercourse with her husband. The duration of her imprisonment was therefore necessarily bounded by the extreme limit of gestation, and what this was we are left to speculate, for Bracton only observes that in case of the pregnancy taking place, it may be "easily known whether the child is really or presumptively the child of the husband, or of another person, by computing the period between the mother's delivery and the death of her husband, as well as the period which she had assigned as the date of her conception. It is said, indeed, although others are of a contrary opinion, that a woman cannot exceed the period of gestation by one day, unless the child should have died in the womb, or have caused, by some extraordinary malformation, imminent danger to its parent." He admits elsewhere that if the mother's delivery be deferred to such a period as that "it is not probable that the child can have been begotten by the deceased husband, then the child is liable to be bastardized."

With reference to the fourth ground of exception authorized by Bracton, the proceedings connected with the execution of the writ *de ventre*, as already described, are sufficient proof of the admissibility of circumstantial evidence to controvert the presumption of legitimacy. The female whose pregnancy was the subject of inquiry underwent a strict examination by a jury of her own sex, and was obliged to answer a series of questions relative to the legitimacy of the child of which she could prove herself *enceinte.* These questions being prescribed by law, could not contain any irrelevant matter. They are not confined to the access, or even cohabitation, or virility of the husband, but assuming these

facts until they are disputed, they scrutinize the circumstances of the conception with such minuteness, as to shew the liability of the child to be bastardized as the result of an adulterous intercourse, although the mother was living with the husband at the date assigned for the conception, and under no disability of having conceived by him. The jury were to interrogate her "concerning the time of her conception—*how*, *when*, and *where*, it took place." If the mother ascribed her conception to an adulterer, and satisfied the jury, from the correspondence of time and place, of the truth of her statement, there seems no reason for doubting that the fact of bastardy would be treated like any other fact, and pronounced sufficiently proved. The questions would otherwise be nugatory.

Fleta, the copyist or condenser of Bracton, differs in no essential respect from his original. He is wholly silent on the period of gestation, and his only notice of the moral evidence by which the presumption in favour of legitimacy can be affected, is with reference to the recognition or non-recognition of the child.

When we look into the writings of Britton, another of our old English jurists, but comparatively more modern than either Bracton or Fleta (these by the way, wrote in Latin, while the former used the old Norman French), we find there something definite respecting the limits of gestation. It is Britton who has left us the most detailed account now extant of the process under the writ *de ventre inspiciendo*. We learn from him that forty weeks constituted the limit of the period during which the widow could be confined under this writ, and that the illegitimacy of the child was the inevitable result of the birth being protracted beyond that time. The heir was entitled to demand immediate possession of the fief upon the expiration of the forty weeks, and the right could not, upon any pretext, be any longer suspended.

On the other hand, if it proved that the pregnancy was real, and the birth occurred within the forty weeks, it did not follow *de facto* that the legitimacy was secured. The heir presumptive was still at liberty to aver that the child was begotten by an adulterer, or that the husband was absent long before its birth, or that its legitimacy was irreconcilable with any obvious or notorious circumstance: and if the heir could establish any one of these averments, it is expressly declared that he should not be deprived of the inheritance.

The earliest case of contested legitimacy on record, was decided five years after Britton's death—namely, Foxcroft's case, 10 Edward I. (1282). An infirm sickly man, confined to his bed, was married privately, and without the usual solemnities, to a woman who was already pregnant; in twelve weeks after marriage she gave birth to a son, but it was adjudged a bastard. The clandestine nature of the marriage, there can be little doubt, operated in determining the verdict: for the facts appear to have afforded ample ground for presuming a conspiracy, and thus constituted the strongest moral evidence that the child was illegitimate.

But the subsequent practice of the English courts was not in accordance with the spirit of Bracton, Fleta, and Britton. In the Year-Books we find the question of legitimacy once more cramped within very narrow limits. The fact of legitimacy was always presumed, unless it could be disproved by what was called special matter—viz. the husband's impotency, or his being out of the seas (*extra quatuor maria*) during the period of his wife's gestation. Chief Justice Thorpe decided in a case, 41 Edw. III. "that all matter was irrelevant which was only argumentative to prove the bastardy, for the party ought to conclude, and so bastard;" meaning by "conclude" to adduce the special matter of impotence or ultra-marine absence. And this decision was held binding through several successive reigns.

It may serve at once as an example of the partiality towards the civil law displayed by some of the judges, and a specimen of the language of the court on some of these trials, to mention that Judge Richill (7 Hen. IV.), in giving judgment in a case, used the extraordinary expression, more emphatic, certainly, than decorous—"Whoever bulls my cow, the calf is mine!"

The Year-Books are wholly silent as to the legal period of gestation. But Mr. Hargrave, the learned annotator of Coke Littleton, after diligently examining some contemporary sources of information, concludes, "that the law recognized forty weeks as the *usual* period of gestation, but *exercised a discretion* of allowing a longer period *where it was required by the opinion of physicians*, or the circumstances of the case." And this, perhaps, is as nearly as possible the actual state of our common law on the subject.

Lord Coke, with some inconsistency, has stated forty weeks to be the "ultimum tempus pariendi," while he refers to an authority which does not altogether warrant his statement: he is also at variance with some decisions of the courts in his own lifetime, which allowed forty weeks and ten or eleven days as the latest period. It is curious enough, that from this time until the year 1825 (an interval of nearly 200 years), the question was not again agitated in

this country. A case, Foster *v.* Cook, which occurred in Lord Thurlow's time, has been sometimes referred to as sanctioning a period of forty-three weeks; but it has been repudiated by some of the best authorities, and pronounced to be undeserving a place in our reports.

It was in the year 1825 that the proceedings on the claims to the Barony of Gardner took place before the House of Lords. I shall presently state the chief facts connected with that case, but may here mention, that it was attended with peculiar circumstances, in the highest degree interesting to the medical jurist. It was argued by the ablest counsel before the most learned law-lords of the day, and the testimony of sixteen accoucheurs, of the highest celebrity in London, was heard on the respective sides of the question. Fortunately we are possessed of an accurate report of the evidence, as well as of the opinions and judgments of their lordships. The whole has been published in one volume by Mr. Le Marchant, who was engaged as one of the counsel in the case; and to this gentleman's luminous preface I have to acknowledge myself much indebted for many of the preceding remarks.

In France.—The French law, previous to the Revolution, was very unsettled and vague in respect to decisions concerning legitimacy. Even so late as the year 1779, the parliament of Rouen recognized as legitimate a child born eleven calendar months and a day (nearly 48 weeks) after the death of the alleged father. But the Code Napoleon, the existing law of France, withholds the presumption of legitimacy when the child is born 300 days after the dissolution of the marriage, or when its birth has been concealed from the husband.

In Prussia.—It may be added that the Frederician code, without absolutely declaring children born in the *eleventh* month illegitimate, attaches such conditions to the proof of their legitimacy as make it almost unattainable.

Question of Prematurity.

1. *Where the infant is apparently full grown.*—The most usual form in which the question of prematurity is raised respecting a birth is, when a child, with all the appearance of having reached the limits of intra-uterine development, is born at a date too near the marriage day, or the return of the husband after a long absence. Suppose at six or seven months a married woman brings forth a child of the full size and perfect growth, there can be no room to doubt but that it is illegitimate; for a child of six or seven months has never been known to attain the development of nine. It is certain that at nine some infants are still very small, and perhaps no larger than many at six or seven months; but still the difference is characteristic, and not to be mistaken: the nine months' child will always be found much farther advanced in growth; the colour and texture of the skin, the nails, the hair, the relative proportions of the trunk and limbs, together with other peculiarities already described*, will serve sufficiently to mark the distinction.

2. *Where it is immature.*—Should the infant present obvious appearances of being incompletely formed, the question of premature birth may yet be raised if the growth attained do not correspond with the time elapsed since marriage, or the return of the husband. We had an instance of this kind in the *fama clamosa* case, noticed in a preceding lecture, where, at five months and a half after marriage, an infant was brought forth, which was living, and not unlikely to continue to live. The difficulty was to shew, that, though immature, it was not premature (as considered in reference to the date of the marriage), nor, therefore, illegitimate. Medical evidence was eagerly sought, in order to decide the question; but the moral circumstances seem to have had more weight than the physical in removing the scandal.

Parturition habitually early.—There is a peculiarity in the nature of some women which ought not to be forgotten—namely, that of never going to their full time; bringing forth their children, for instance, in the seventh or eighth months. Some authors add what is still more remarkable, that this peculiarity is entailed on the females of certain families, who, without approaching the ninth month by several weeks, give birth to *mature* children. Of this, however, I must take leave to doubt, though we have it on the authority of La Motte. He tells us that he knew a young lady who, in the seventh month after marriage, brought forth a lively *mature* infant, to the great discomfiture of the husband, who began to suspect his wife's chastity; but when he again became a father, in seven months after a renewed intercourse, he was satisfied. Both these children, says La Motte, were vigorous and healthy; they grew up to man's estate, and became distinguished in the military profession. He adds, that this lady's daughters were also regularly confined in the seventh month. With every deference for such authority, I must still hesitate to believe that these seven months' children were not immature: on a careful inspection I doubt not it would have been perceived, that by the abridgment of their sojourn in the

* Lecture III. p. 69, *ante*.

uterus, they were perhaps not a little curtailed in their growth and due proportions.

3. *About the full time.*—The chief difficulty connected with the question of prematurity is, perhaps, in reference to those births which anticipate the usual period by a week or two; for this brings us at once to the moot point whether or not there be a fixed and definite time for the human female, undisturbed by accidents, to bring forth the fruit of her womb? Or is there, as others assert, a latitude allowed by nature, so that mature birth, which usually takes place at the end of nine calendar months, may occur sometimes a week or two earlier?

There is much reason for supposing that the latter position is correct; for in the first place, even granting that the deviation should extend to two weeks, this would only amount to a twentieth of the whole period,—a degree of deviation which, in respect to other periodical functions, would be generally admitted to be inconsiderable. Take, for example, menstruation: the law of nature seems to be that it should recur every twenty-eight days; but who does not know that the menses are frequently several days earlier in some women, while in others they arrive more tardily,—and this without apparent detriment or disturbing cause? Puberty, again, is an epoch which seems to be regulated by a law of nature, yet its approach is often premature,—often retarded. So with the capacity for bearing children, which by a law of nature seems to cease with the women of this country about the age of 45, in many is lost some years earlier, and in many several years later. And so with teething, and other phenomena, which appear to be, and no doubt are in general, subjected to a regular law—a law, however, which, so far from being abrogated, seems only confirmed by the exceptions.

The analogy of what is observed to take place in animals shall be presently noticed when speaking of retardation: it need only be added, in this part of our subject, that the weight of authority is decidedly in favour of the possibility of maturity being attained, and of a mature birth being effected, in some women a little earlier than in others. Haller mentions among those circumstances which are calculated to hasten the time of parturition—the large size of the fœtus, and its more active growth.

Where we may be called upon to give an opinion, we must have a regard to the possible operation of such circumstances; nor where the appearances of maturity seem complete, should we rashly decide that the birth has been premature because it has not occurred at the end of the ninth month. Aristo, king of the Spartans, acted with an ignorant severity when he refused to recognize his son Demaratus, who was born somewhat sooner than the usual time after marriage.

Question of Retardation.

The observations already made as to what takes place in regard to other functions, will serve in some measure to show how births may be retarded, as well as precipitated, without abrogating what appears to be a law of nature.

Argument from analogy.—Every species of animals have their particular time allotted for bringing forth,—sheep at the end of the fifth month; mares on the completion of the eleventh; cows at the ninth complete; asses at the tenth; bears towards the end of the fourth; swine after five months; rabbits after one month; bitches after two; &c.: yet it is certain that owing to causes not readily to be assigned, deviations from the limits belonging to several of these species have been observed. Harvey, Heister, Wagner, and Professor Wildberg, have stated examples. M. Tessier, also, a distinguished member of the Academy of Sciences of Paris, directed his attention to this subject for many years, and found that even in those animals which are most carefully tended, and protected from disturbing influences, the varieties in the times of bringing forth have been very striking: thus—

Of 160 cows, the periods of gestation were observed to be as follow:—

Of 14	241—266 days.
3	270
50	270—280
68	280—290
20	300
5	308

Giving a difference of 67 days between the longest and shortest term.

Of 102 mares:—

3	311 days.
1	314
1	315
1	326
2	330
47	340—350
25	350—360
21	360—377
1	394

Giving 83 days difference between the extremes.

And similar results were observed with regard to sheep, rabbits, and other animals.

Now the argument thus deduced from analogy must be allowed to be very cogent; for if these facts be true, of domestic and savage animals which lead their lives subject to

so few causes that can tend to disturb the law of nature, how much more probable is it that woman is not limited to a certain fixed hour for bringing forth, when we consider her moral nature, and the influences to which, as a member of society, she is exposed.

Facts and cases.—But the question seems perfectly determinable by reference to facts, even if we had no analogies in its support. Let us state a few of these.

Dr. William Hunter, in a note communicated to Mr. Hargrave, and published by the latter in his Coke Littleton, says,—"The usual period is nine calendar months; but there is very commonly a difference of *one, two, or three weeks.* I have *known* a woman bear a living child in a perfeetly natural way, *fourteen days* later than nine calendar months, and *believe* two women to have been delivered of a child alive, in a natural way, *above ten calendar months* from the hour of conception."

The difficulty is in ascertaining the exact time of conception; women themselves, more especially married women, can rarely state it with precision, except under peculiar circumstances—such as a single act of sexual intercourse, effeeted clandestinely, or where the repetition is precluded; and it must be recollected that medical men in their cognizance of the history of any pregnancy, must derive their information as to the time of the occurrence of conception from the females themselves. In some well-authenticated instances this end of the chain has been laid hold of, and the fact of the period of gestation being occasionally protracted beyond the 39 weeks, or nine calendar months, has thus, we think, been put beyond all question.

M. Desormeaux has related a case which occurred under his own observation. "A lady, the mother of three children, became deranged after a severe fever. Her physician thought that pregnancy might have a beneficial effect on the mental disease, and permitted her husband to visit her, but with this restriction, that there should be an interval of three months between each visit, in order that, if conception took place, the risk of abortion from further intercourse might be avoided. The physician and attendants made an exact note of the time when the husband's visit took place. As soon as symptoms of pregnancy began to appear, the visits were discontinued. The lady was closely watched all the time by her female attendants. She was delivered at the end of *nine calendar months and a fortnight.*"

Professor Burns mentions "ten calendar months and ten days dated from last menstruation" as the longest term he has met with.

Dr. Montgomery relates a case in which he had an opportunity of observing the period of gestation, where the time of conception was known with certainty. A lady who had been living at a watering place, through ill health, apart from her husband, for some months, received a visit from him on the 10th of November, 1831. He remained with her that night, but was obliged to return to town next day. The result of the visit was conception. She quickened on the 29th of January 1832, and was delivered of a healthy child on the 17th of August following, being exactly 280 days, or nine calendar months and a week, after conception.

In another case which occurred in Dr. Montgomery's practice, the gestation was, at least, 41 weeks and a few days, and may have been 42½ or even 44; the difficulty of stating the term exactly being owing to the difficulty of deciding where the reckoning should begin; the date of the last appearance of the menses being alone certain.

The term of gestation was elicited incidentally in a seduction case which was tried at Lancaster some years ago. Sexual intercourse took place between the prosecutrix and the accused on the 8th of January: it was never repeated; and a child was born on the 18th of October following—that is to say, on the 284th day of pregnancy. The facts were positively sworn to—no observation was made by defendant's council on the unusual length of the pregnancy—and a verdict for 50*l.* damages was returned*.

Dr. Dewees, of Philadelphia, states "that the husband of a lady, who was obliged to absent himself for many months in consequence of the embarrassment of his affairs, returned one night clandestinely, and his visit was only known to his wife, her mother, and the doctor (Dr. Dewees himself). The consequence of the visit was the impregnation of the wife; and she was delivered of a healthy child in *nine months and thirteen days.*"

In the medical evidence given in the Gardner Peerage case, several examples are mentioned by distinguished practitioners, of births having been retarded within their experience. Dr. Blundell declared that he knew one case in which conception certainly took place on the 9th of November, and delivery did not occur till the 23d of August following, making an interval of 287 days, or nine months and fourteen days. Dr. Merriman deposed that he had known cases to be extended to 285 days; in two or three instances to 296; in one to 303; and in one to 309, or nine months and thirty-six days.

* Medical Gazette, vol. xi. p. 57.

Testimony as to a fixed limit.—When we seek, on the other side, for the evidence on which the doctrine of an invariable time for delivery is grounded, we find it adduced by a small number of authorities, who, having happened to be acquainted with some few cases in which they thought they could be sure of the date of conception, observed that the day of parturition coincided with their idea of a general law. But have we not a far greater number of cases, as just now shown, in which the delivery did *not* so coincide? And even if we had not this preponderance on the side of experience, to what does the testimony of the party now referred to amount, more than to a certain degree of negative authority—that being assumed as not happening, which has not happened within their circle of observation? Let us see, however, whether, in the experience of these practitioners, the law was so very invariably obeyed.

Sir Charles M. Clarke, in his evidence in the Gardner case, states forty weeks to be the legitimate time, but only an average time, calculated from about the first suppression of the menses.

Dr. Blegborough, on the same occasion, considers thirty-nine weeks as the exact time, but forty the ultimatum: Mr. Pennington, that forty weeks is the regular time, but that it may be three or four days later.

Dr. Gooch maintains that thirty nine weeks is the exact time, but that it may be a day or two earlier or a day or two later.

Dr. D. Davis also insists on thirty-nine weeks as the period, but inclines rather to one or two days less than beyond it.

And such was the whole of the evidence that could be procured in support of a precise time for parturition: three of the witnesses being for forty weeks, two for thirty-nine, the whole five admitting that there might be a certain excess, or defect, in the measure of the duration, and, in fact, differing among themselves to the extent of not less than *thirteen days!*

General inference.—From all that has been stated, it seems not unreasonable to conclude that there must be a certain extent of retardation admitted—perhaps even to two, three, or four weeks, beyond the nine calendar months—particularly when the probability of the fact is borne out by good moral evidence. Some have thought that there should be also physical evidence in the appearance of the child, exhibiting signs of a more than ordinary degree of development, attained by its lengthened residence in the uterus. If such signs be visible, they will of course confirm the plea of protracted gestation; but it is not certain that a sojourn in the uterus continued beyond the average period, is conducive to a corresponding growth; at all events, there are not sufficient grounds for our insisting on such proofs.

In extending our admission of the possibility of gestation being protracted to four weeks beyond nine months—that is, to 43 weeks, or 301 days—we go as far probably as any reasonable evidence can warrant us. When called on to admit cases of longer duration, we should require to have proof of the most convincing kind ere we give credit to alleged deviations which are confessedly so rare.

Claims to the barony of Gardner.—In the Gardner peerage case, the possibility of gestation being protracted to 311 days was a ground on which it was sought to establish the legitimacy of one of the claimants. The leading facts of the case were these:—Captain (afterwards Lord) Gardner, took leave of his wife on board ship, on the 30th of January, 1802, and sailed to the West Indies; whence he did not return until the 10th of July following. On the 8th of December Mrs. Gardner was delivered of a full-grown male child—that is, 311 days after the latest intercourse in which it could have been begotten by her husband. But there were other glaring facts in the case, tending to overthrow the legitimacy of this child. Mrs. Gardner was proved to have had, during her husband's absence, an adulterous intercourse with a Mr. Jadis, against whom a verdict upon that account for 1000*l.* damages was obtained by Captain Gardner. It moreover appeared, that when the Captain returned in the summer, Mrs. Gardner did not conceal her pregnancy, having hopes that the child might be born within a legitimate period: she even took measures for hastening parturition, or bringing on premature labour, by riding over the stones as much as possible in her carriage. But finding these means ineffectual, she pretended that it was a dropsy she laboured under, and contrived to be delivered secretly; nor was the child ever recognized by, or presented to, her husband. Yet this was Henry Fenton Jadis, *alias* Gardner, the counter-claimant of the peerage.

The remainder of the case is briefly told. Captain Gardner procured a divorce from his adulterous wife, succeeded to his father's title in 1808, and the year following married a lady by whom he had issue Alan Legge Gardner, described as his only son and lawful heir. In the year 1824, Alan Legge being 14 years of age, while Henry Fenton was one-and-twenty, petitioned the King to have his rights secured to him, by inscribing his name on the par-

liament roll as a minor peer. The petition of the claimant was referred to the Attorney-General (the present Lord Lyndhurst), by whom it was brought before the House of Lords. Counsel, as I have already mentioned, was heard on both sides; evidence, 1st, of the pedigree of the claimant, and, 2dly, of the illegitimacy of Henry Fenton Gardner, was adduced; and the matter ended in favour of the petitioner.

The illegitimacy of Henry Fenton Gardner was established, 1st, by evidence of his mother's adultery, and, 2dly, by evidence tending to show that the period of gestation was such as to render it improbable, if not impossible, that Captain Gardner could be his father.

It was on the latter of these points that the great body of medical evidence, already alluded to, was adduced. But it should be added, that the fact of illegitimacy was, after all, decided irrespectively of medical considerations. Henry Fenton was bastardized, not by reason of the time of his birth, but in consequence of his mother's adultery, and her concealment of the birth from her husband.

Still the proceedings in the Gardner case must be considered interesting, as having elicited so much evidence respecting the results of medical experience; and when we recollect that the main question is still open to discussion in any future case of a similar kind, the record of the proceedings must be deemed valuable. In Mr. Le Marchant's book you will find ample information on the subject; and I ought perhaps to add, that the discussions in some of our medical societies, soon after the publication of that work, and of which an account may be seen in the periodicals of the day*, will also prove not unworthy of your perusal.

I may take this opportunity of mentioning that it has been represented to me, that in noticing, in last lecture but one, the principal cases of transposition of the viscera, I omitted one which has been described by Dr. Lyons, of Brighton. I must be content to refer you to the case itself, in the 17th vol. of the MEDICAL GAZETTE, p. 514, where you will see that in the instance of a living female, of about twenty years of age, the heart was ascertained to be on the right side of the chest, and probably reversed, or "inverted." There are also some other circumstances connected with the case, which render it interesting.

* MEDICAL GAZETTE, vol. v. p. 337, *et sqq.*

ON THE IDENTITY OF THE *VIE PROBABLE* AND *VIE MOYENNE*.

To the Editor of the Medical Gazette.

SIR,

A COLLECTION of the ages of 3,938,496 persons of both sexes, whose burials were registered during eighteen years (1813-1830), appears in the Population Volumes of the year 1831; and some notice of the result of 11,300 returns obtained from the parochial clergy of England and Wales for this purpose, was indispensable in the preface to those volumes.

Knowledge of the ages of the population then existing had been obtained in the enumeration of the year 1821, with a view to future use, when the registered burials should have accumulated to the year 1830 inclusive, the ages of the deceased having been first recorded in the year 1813, and 1821 being nearly a middle point of the entire eighteen years.

The increase of population during the life of man was the third element requisite for ascertaining an ultimate result; and this kind of inquiry had been pushed back to the year 1700, by the parish register investigation of 1801, under the authority of the first Population Act. These parish register returns were deemed of unquestionable authority from the year 1750, or for eighty years retrospectively from 1830; so that a small degree of uncertainty attached exclusively to those above that age, who are very few in a stationary population, and even fewer in England, where the population had doubled in the last 100 years.

A statement of the progressive increase of population in England was calculated from these materials, and appeared in the preface to the Population Volumes of 1801; and from the further lights afforded by subsequent population returns, aided by reference to the prices of corn, a more accurate calculation was made by Mr. Finlaison, and appears in the preface to the Population Volumes of 1831 [at p. xlv.]

From the combination of materials

thus obtained, Mr. Finlaison was enabled to calculate human mortality in England from nearly four millions of burials, in like manner as Mr. Milne from 1840 burials in the city of Carlisle; and it is proof of the extraordinary sagacity of the last-named calculator, that from such scanty materials he produced a table of the mortality of both sexes conjointly, which, from the age of 20, is always between the mortality of the two sexes as calculated by Mr. Finlaison, and differing very slightly from that of Mr. Finlaison's female sex between the fourth and the twentieth years of life.

Indispensable as is the knowledge of the increase of population, for the above purpose of deducing a law of mortality from national or local inquiries, such knowledge has not been obtained, except in Sweden, from the year 1749 (p. 396 of Milne), from which Mr. Milne has calculated Swedish mortality, in his elaborate tables iv. v. vi., at pp. 566-570 of his second volume.

But similar attention to the increase of population has not been customary among continental calculators, who usually satisfy themselves by inserting a conditional phrase, "provided the population is stationary," and do not the less proceed as if that supposition were well founded; which, however, probably never was true, and which certainly never has been proved to be true during the life of man, in any nation on earth.

The high reputation of such men as d'Ivernois, Quetelet, and Villermé, who have satisfied themselves thus easily, and in some instances produced strange results, rendered necessary a circumstantial proof of the effect of the ascertained increase of population in the English counties during thirty years (1801-1831); and for this purpose the *vie moyenne*, or expectation of life in the first year, was calculated on the burial returns of the recorded ages of the deceased in every county separately; the results proving that by thus disregarding the very different rates of increase, the *vie moyenne* of adjacent sections of the county of York seems to differ as 40 to 29; and in Lancashire, where the population increases most rapidly, the *vie moyenne*, so calculated, sinks to $25\frac{1}{2}$. [See last page of the Population preface of 1831.]

Thus much was requisite in support of some passages in the said preface (p. xlvi.); and at the bottom of the preceding page, the *vie probable* (the age at which one-half are dead) is shewn to differ more widely in various counties (from 12 years to 38 years), from the same disturbing cause.

Further, it was remarkable, in pursuing these investigations, that a converging series of the *vie probable* and *vie moyenne* being constructed in the manner most consistent with fact, coincided in the several counties which indicated the smallest increase of population, or about 20 per cent. in the thirty years; so that it was impossible not to suspect that, at a lower rate of increase, the series of the *vie probable* and that of the *vie moyenne* would diverge from that point in the same ratio as they had actually converged from 100 to 20 per cent. increase, and that such series was governed by some analogy, which, if discovered, might be expected to throw new light on the general law of human mortality.

My suspicion or conjectural inference thus became worthy of practical investigation; and a scale was prepared accordingly, by assuming the series of the *vie probable* to converge at twice the rate of the *vie moyenne;* and in applying this combined scale to the several counties, many of them indicated a remarkable agreement with it.

How far this is true best appears by the following tabular scale applied to those counties which are placed in juxta-position with it; and at the bottom of these counties is added Cornwall, the most healthy of our counties, where the actual *vie probable* surpasses the expected amount by $9\frac{1}{2}$ years, the *vie moyenne* by 5 years, thus preserving the analogy of one to two. The Isle of Ely is also subjoined in contrast, as the least healthy part of England, where the *vie probable* is seen to fall short of the expected amount by 11 years; the *vie moyenne* by $3\frac{1}{2}$ years; the latter as one to three, instead of one-half, the general rate. But exact conformity must not be expected, local healthfulness and its opposite not being the only causes by which it is liable to be disturbed. One of these causes is obvious, on consideration that the increase of population in the several counties is not known be-

TABLE I.—SCALE OF COINCIDENCE

OF THE

Vie Probable, and of the *Vie Moyenne*, with the Increase of Population.

Decrease per Cent.	Increase per Cent.	*Vie Probable*	*Vie Moyenne.*	Increase per Cent.		*Vie Probable.*	*Vie Moyenne.*	Increase per Cent.		*Vie Probable.*	*Vie Moyenne*
Theory	Fact.	Years.	Years.	Theory	Fact.	Years.	Years.	Theory	Fact.	Years.	Years.
19	0	48·2	44·4	14	33	35·0	37·8	49	68	21·0	30·8
18	1	47·8	44·2	15	34	34 6	37 6	50	69	20·6	30 6
17	2	47·4	44·0	16	35	34·2	37·4	51	70	20·2	30·4
16	3	47·0	43 8	17	36	33·8	37·2	52	71	19·8	30·2
15	4	46·6	43·6	18	37	33·4	37·0	53	72	19·4	30·0
14	5	46·2	43·4	19	38	33·0	36·8	54	73	19 0	29·8
13	6	45·8	43·2	20	39	32 6	36·6	55	74	18 6	29·6
12	7	45·4	43·0	21	40	32·2	36·4	56	75	18 2	29·4
11	8	45·0	42·8	22	41	31·8	36·2	57	76	17·8	29·2
10	9	44·6	42·6	23	42	31·4	36·0	58	77	17·4	29·0
9	10	44·2	42·4	24	43	31·0	35·8	59	78	17·0	28·8
8	11	43·8	42·2	25	44	30 6	35·6	60	79	16·6	28 6
7	12	43·4	42·0	26	45	30·2	35·4	61	80	16·2	28·4
6	13	43·0	41·8	27	46	29 8	35·2	62	81	15·8	28·2
5	14	42·6	41·6	28	47	29·4	35·0	63	82	15·4	28·0
4	15	42·2	41·4	29	48	29·0	34·8	64	83	15·0	27·8
3	16	41·8	41·2	30	49	28·6	34.6	65	84	14·6	27 6
2	17	41·4	41·0	31	50	28 2	34·4	66	85	14·2	27·4
1	18	41·0	40·8	32	51	27·8	34·2	67	86	13 8	27·2
—	--	- - -	- - -	33	52	27·4	34·0	68	87	13·4	27· 0
0	19	40·6	40 6	34	53	27·0	33·8	69	88	13·0	26·8
Increase.	--	- - -	- - -	35	54	26·6	33·6	70	89	12·6	26·6
1	20	40·2	40 4	36	55	26·2	33·4	71	90	12·2	26·4
2	21	39·8	40·2	37	56	25 8	33·2	72	91	11·8	26·2
3	22	39·4	40·0	38	57	25·4	33·0	73	92	11·4	26·0
4	23	39·0	39·8	39	58	25·0	32·8	74	93	11·0	25·8
5	24	38·6	39·6	40	59	24·6	32·6	75	94	10·6	26·6
6	25	38·2	39·4	41	60	24·2	32·4	76	95	10 2	25·4
7	26	37·8	39·2	42	61	23·8	32·2	77	96	9·8	25·2
8	27	37·4	39·0	43	62	23·4	32·0	78	97	9·4	25·0
9	28	37·0	38·8	44	63	23·0	31·8	79	98	9·0	24·8
10	29	36·6	38·6	45	64	22·6	31·6	80	99	8·6	24·6
11	30	36·2	38·4	46	65	22·2	31·4	81	100	8 2	24·4
12	31	35·8	38·2	47	66	21·8	31·2				
13	32	35·4	38·0	48	67	21·4	31·0				

TABLE II.

Comparison of Increase of Population, Vie Probable, and Vie Moyenne.

England and English Counties.	Per Centage Increase of Population.				Vie Probable.		Vie Moyenne.	
	1801 to 1811	1811 to 1821	1821 to 1831	1801 to 1831	According to Scale.	According to Fact.	According to Scale.	According to Fact.
1. Rutland	..	13	5	19	40·6	38·4	40·6	39·1
2. North York	7	11	2	21	39·8	38·2	40·2	40·3
3. Wilts	5	13	8	29	36·6	35·7	38·6	38·1
4. Westmorland	10	12	7	32	35·4	35·9	38·0	39·2
5. Suffolk	11	16	9	41	31·8	31·9	36·2	36·9
6. Devon	12	15	13	44	30·6	31·4	35·6	36·2
7. Hants	12	16	11	44	30·6	29·6	35·6	35·0
8. Cumberland	14	17	10	45	30·2	28·4	35·4	35·3
9. Hertford	14	16	11	47	29·4	28·1	35·0	34·6
10. Bedford	11	19	14	50	28·2	26·6	34·4	34·3
11. Leicester	16	16	13	52	27·4	25·6	34·0	33·3
12. Lincoln	14	19	12	52	27·4	25·6	34·0	33·3
13. Kent	21	14	12	56	25·8	24·2	33·2	31·5
England and Wales	15	16	15	57	25·4	25·4	33·0	33·0
14. Stafford	21	17	19	72	19·4	18·5	30·0	29·2
15. West York	16	22	22	73	19·0	18·3	29·8	29·3
Lancaster	23	27	27	99	8·6	11·6	24·6	25·6
Cornwall	15	19	17	60	24·2	33·7	32·4	37·5
Isle of Ely	14	24	16	64	22·6	13·8	31·6	27·9

yond the last thirty years; that is, not beyond the birth of two-thirds of the existing population (6528 in 10,000, according to the census of 1821), for nothing can be less consistent with fact than an equable ratio of the increase of population, a species of assumption which was carried back by King (one of the fathers of English statistics) to the Norman Conquest, and which has not quite disappeared to the present time. It happens, indeed, that the increase of population in England and Wales having been 57 per cent. in thirty years (1801-1831), has arrived at that amount by an annual increment, differing very little at any time from 1·5 per cent., which gives the above total increase very accurately. But in the twenty-one years preceding 1810,

it is pretty well ascertained by parish register returns, that the actual increment (supposing it to have been uniform) was not much more than half the above, or about ·85 per cent., the total increase from 1780 to 1801 having been between 17 and 18 per cent. Nor is there any thing like uniformity in the increment of the several counties in the three decennial periods between 1801 and 1831, as may be seen in the foregoing table, and is still more evident in Berkshire and Salop, which counties shew an equal increase of 33 per cent. in the thirty years; but the decennial increment of the former was 8, 12, 10; of the latter, 16, 6, 8,—a dissimilitude which could not but produce a discrepancy in the ages of those who have died, and of those who survive, in the two counties. This cause, in combination with salubrity or insalubrity (before noticed), permits us not to expect regular conformity to the combined scale, which yet agrees well enough with fact in the fifteen counties enumerated in the comparative view annexed to the scale of coincidence.

But why should the converging lines of the *vie probable* and *vie moyenne* meet at 19 or 20 per cent. increase of population? This bears the aspect of caprice or accident rather than of any established law, and if it be supposed (for the sake of argument) that such meeting or coincidence takes place in any given state of population, the quiescent state of NO MOVEMENT in advance or retreat, in progress or regress, bids fairest for preference; the very state, in fact, to which every respectable calculator endeavours to approximate in his apparatus for determining the true law of mortality, and the expectancy of life resulting from it; and as not one of these calculators has had in his thoughts any coincidence of the *vie probable* and the *vie moyenne*, it is fair to examine in support of such supposed coincidence the results at which calculation has actually arrived.

First in priority of date is the law of mortality and its results, as calculated by Mr. Milne from Swedish documents, after deducing the stationary from the actually progressive population (pp. 537—8). In his Table V., p. 569, both sexes are combined, and the expectation of life in the course of the first year of life is 36·12, to which adding half unity, (36·12 + ·5 = 36·62) the average duration of life including the entire first year, is 36 years 32 weeks; and as the *vie probable* falls between 36 and 37 years, but nearer to the last, the coincidence is exact.

Mr. Milne's Carlisle Tables II. and III., pp. 564—5 may next be examined; and in these the expectation of life in the middle of the first year being 38·72, the average duration of life and annual mortality is 39 years 11 weeks. The *vie probable* (one-half dead) falls on the 41st year of life, so that the discrepancy is one year and three-quarters; but on this it may be remarked that Mr. Milne assumes the mortality of the first year of life very low, at 1539 in 10,000, (though he compensates for this in the next four years) whereas the Swedish mortality is 2015. A middle term may be found in the latest experience of Prussian mortality, which is rather less than 1700 in the first year of life, and if this were adopted Mr. Milne's radix would be increased to 10,161 (1539+161 = 1700) whereby the annual mortality and the *vie probable* would agree very well at the 40th year of life.

Mr. Finlaison, in his law of mortality, deduced from the population returns, (after correcting the effect of progressive increase) appears to have assumed the Prussian law of mortality for the first year of life, the registration of infant burial in England being defective from a known cause; and he assumes the mortality of males in the first year of life at 1826 in 10,000, their annual mortality at one in 40·5, and their *vie probable* at 43·5. Of his females, 1568 die in their first year; their annual mortality is one in 43·7, and their *vie probable* is 48·5. These differences of three years and five years respectively, are considerable, and adverse to my opinion of the identity of the rate of annual mortality with the *vie probable*: but, in truth, nothing certain can be predicated of the mortality of the first year; and if Mr. Finlaison had made use of the Swedish estimate of 2015 deaths in 10,000 born, his annual mortality of the combined sexes might have decreased from one in 42 to one in 39 or 40, and his *vie probable* have fallen from 46 to the same level: and I shall take the liberty to add here, in support of the superiority of the Swedish estimate, that burial registers seldom fail to err on the side of defect, and (if faithful) cannot be redundant.

After speaking thus freely of the ignorance under which we labour of the law of mortality of the first year of life, it is necessary to enter into explanation, lest this uncertainty should be supposed by the uninitiated to pervade

the whole science of what Laplace calls *statistiques vitales*, (the statistics of human life) where he announces that the annual mortality of any nation or society expresses the *vie moyenne* at birth, (the average duration of life) and leads to the amount of its population by an easy process, when once this multiplier of the burials is obtained. "But, continues he, "La determination de ce faeteur est le point le plus delicat;"—this is a point of much difficulty; a difficulty which arises thus.

Insurances are seldom or never effected on the first years of life, and the nominees in government Tontine annuities are not numerous until they have fully reached the most advantageous expectation of life, which occurs from three to six years of age. Yet enough are enrolled in their first year for the purpose of calculation, if they were equably spread over that year; but the intensity of mortality is such at the commencement of human existence, that one-half of such deaths occur in the first three months; whence it happens that no Tontine annuitants can prudently be enrolled till after that period, nor indeed until the the greater portion of the first year has been by them survived. Thus the usual authority of enrolled lives here fails us, and we have no unquestionable basis on which to calculate the mortality of the first year of life, including as it does the first days, and weeks, and months after birth; and the difficulty stated by Laplace becomes insuperable, unless by an exactness and severity of registration not easily enforced*.

But all this does not affect the calculated expectation of life beyond the age of infancy, because the series of such calculations travels downwards from the highest ages, which, indeed, are much exaggerated, only two individuals having been discovered by the collectors of authentic records of mortality in France, England, and Holland†, although the number of such recorded deaths is not less than 27,000, while common repute (as expressed by the relatives of the aged deceased) represents one in 2072 in England as having attained to that great age; in Sweden, (A.D. 1754 — 1763), on the same kind of authority, the proportion is one in 1017; and Mr. Milne, in the Carlisle Table, seems to have assumed one in 909. Similar exaggeration in a minor degree is known to prevail from the age of 85, and may be detected, and even measured by comparison with recorded deaths which have occurred in sufficient number at and after that age. I add a Table to this effect, as it also affords general information of the expectancy of life in old age; but it is not to be inferred that the expectation of life in all preceding classes of age is materially affected by the overstated 5 or even 10 years in the ages of the very few individuals who, according to the most exaggerated statement, approach or surpass their hundredth year.

Age.	Mr. Finlaison. Gov. Annuitants.		Equitable Assurance	Average.	Mr. Finlaison. Parish Registers.		Carlisle Table.	Average.	Age.
	Males. Y.	Females. Y.	BothSexes Y.	Years and Decimal.	Males. Y.	Females. Y.	BothSexes Y.	Years and Dec. parts.	
70	9·22	10·99	8·99	9·73	8·94	9·66	9·18	9 26	70
75	7·12	8·46	7·00	7·53	6 78	7·33	7·01	7·04	75
80	4·94	6·50	5·51	5·65	5·05	5·46	5 51	5·34	80
85	3·12	4·84	4·02	3 99	3 85	4·22	4 12	4·06	85
90	1·95	2·83	2·16	2·31	3·42	3 70	3·28	3·47	90
95	1·18	1·55		1·36	3·05	3·20	3·53	3·26	95
100		·50		·25	2·78	2·72	2·28	2·59	100

* In Belgium, where the registration is said to be exemplary, 2250 die in their first year, which materially exceeds the Swedish registration of 2015.

† One individual of one hundred (sex uncertain) is recorded by Deparcieux; one female of 103 by Finlaison.

From the above Table it follows that, at 70, 75, and 80 years of age, selected lives (those of such persons as are concerned in money transactions) maintain a small and very probable superiority in expectation of life. At 85, exaggeration is barely perceptible in the balance slightly inclined to the other side. At 90, the exaggeration of common repute appears to be 1·16 = 60 weeks, and the comparative expectation as 3 to 2. At 95, it is 1·90=99 weeks, or as 7 to 3. At 100, it seems to be tenfold; but with such uncertainty, that it were well if all calculators assumed one male, two females in 10,000 to attain to their hundredth year.

After what has been said, and especially after what I have quoted from Laplace, showing the extreme difficulty of ascertaining the annual mortality in any nation or district, the writer of an article in the British Medical Almanack for 1837 will learn to moderate the severity of his remarks on the annual mortality ascribed to the several counties of England in more than one preface to the Population volumes of various dates. The mortality there stated is avowedly founded on results drawn from Parish Registers, and therefore liable not only to the variation which arises from every different ratio of increase of population in the several counties, but also to defect of registry, which in some places is considerable, in others trifling in amount. Why, then, was a fallacious statement admitted? Partly as popular information which could not be well be withheld; partly because the mortality of the same county at several periods is good authority for comparison with itself, and the prevalence of health or sickness in various seasons may safely be thus inferred. Beyond this, if the writer alluded to is a precise reasoner, let him never rely on annual mortality thus loosely alleged, until he has examined the authority on which it is founded, always mindful that a mere mortuary register is of no value for any general inference whatsoever.

I now return to my main argument founded on the tables inserted at a former part of this letter; and in the first place I must advert to the difficulty of inferring the coincidence and identity of annual mortality and *vie probable* in a stationary population from tables which seem to show that it takes place where the increase has been 20 per cent. in 30 years. I am aware that I have to combat this objection, and I acknowledge that the first table seems to prove, on inspection, that the annual mortality would be 44, the *vie probable* 48, in case of stationary population.

In explanation of this, I must be permitted to observe, that the *vie moyenne* is reduced to about 25 in Lancashire, and that such decrease is caused by the disproportionate number of infants who are born, and consequently die, in a rapidly increasing population; whence it follows that a large omission in the registry of infant burials (of those infants who die before they are baptised) cannot but have the effect of pushing down the several counties from the position assigned to them by a calculation of the *vie moyenne* and *vie probable* founded on such defective registry of infant deaths; and I hope to convince the reader that this occurs in such a degree as to lessen the seeming duration of life in Rutland and North York to 38 years, and to render probable the alleged coincidence at the age of 40 or 41 years, in case of stationary population.

The annual mortality of England cannot differ materially from this last amount, which is expressed by 40·6 in the first table. Mr. Milne, in the Carlisle table, assigns 37·14 as the expectation of life, or *vie moyenne*, of the first year of human life, for the two sexes combined; Mr. Finlaison assigns to males 39·96, to females 43·20, expectation of life in the first year; and these three authorities average at 40·13. But it must not be forgotten that such *vie moyenne* is applicable not to the beginning, but to the middle, of the first year; so that annual mortality is always half a year more than the *vie moyenne*, as usually expressed, and the above average becomes 40·63, which is as near to the 40·6 of the tables as can be desired; and it is to be understood, that the tables are founded on this assumed coincidence, from which the *vie probable* and *vie moyenne* are made to diverge, so that at 57 per cent. increase of population, which is assignable to the whole of England and Wales, the tabular numbers agree with the fact of *vie probable* 25·4; *vie moyenne* 33. Nor will it be denied that what is accurately true of the whole, is fairly applicable as a test or measure whereby to discover the com-

parative effect of variously increased population in the several counties.

It may be worth while to remark, upon this appropriate occasion, that the *vie moyenne*, or expectation of life, does not, strictly speaking, apply to the middle of the year, but to the middle of the *mortality* of the year of which it is asserted; and this, in the first year of life, occurs at the end of the first three months, instead of six months. But such minutiæ are of little value; nor does the attention bestowed on still-born infants (*morto-nes*) by some calculators, appear to me of importance: the entrance into life will always remain somewhat undetermined, and it is but lost labour to approach the mysteries of *Juno Lucina;* we must remember that in the commencement of the history of nations, as well of individual man, we are compelled to rest satisfied under some degree of obscurity. Nor is the other end of human life without its difficulties (already suggested), arising from the customary errors of common repute, and the paucity of authentic examples of extreme old age; whereas, in infant life, the calculator is embarrassed by the crowd who die and are forgotten.

Thus have I brought under notice the two sources of error which tend to represent the duration of human life beyond the truth; inasmuch as these forgotten infants would increase the number of individuals who have lived—that is, the *divisor* of the total years lived; and correction of the overcharged ages of individuals who survive 85, would diminish the number of years lived—that is, the *dividend*—and lessen the *quotient* or average duration of life accordingly. Thus, if ninety individuals lived 3600 years, the quotient would prove their duration of life (*vie moyenne*) to have been forty years. But if the divisor be increased to 100, and the dividend diminished to 3500, the quotient will show their duration of life not to have exceeded thirty-five years. This example is overcharged, but will explain the tendency of such corrections; nor must we forget that M. Quetelet calculates the mortality of infants in Belgium, in their first year, to be 2249 in 10,000 *; so that the similar Prussian mortality taken at 1700, and even the Swedish mortality at 2015 in 10,000, may be erroneous results, arising from defective registration of infant deaths. I say this to prove that the duration of life in England may possibly be overrated at 40 years, and that if reduced to 38 years, my speculation in favour of the coincidence of the *vie probable* with the average duration of life, is not inconsistent with it.

1. I do not undertake to offer a positive demonstration in support of my opinion, but negatively I infer that it is well founded; for I have already shown in tabular form, the tendency of which cannot reasonably be disputed, that although the actual duration of life (*vie moyenne*) cannot really be affected by increase of population, the burial register in that case exhibits the short lives of infants in a proportion so preponderating, that in the given case of Lancashire (where the population has been increasing at the rate of 2·6 per cent. annually), human life seems to be shortened from 40 to 24 years; and a moiety of the recorded deaths (*vie probable*) to have approached within 12 years of the birth of these numerous infants. I have shown also that the population of England *collectively*, exhibits the same kind of result, an increase at the rate of 1·5 per cent. annually, having diminished the *vie moyenne* from 40 to 33 years, the *vie probable* from 40 to 25·4 years; and that the counties, generally speaking, show similar gradation of cause and effect. From this it follows that the converging series of *vie moyenne* and *vie probable* must somewhat meet; and we are authorized to assume that they cross each other, by the example of two Swiss villages, where the *vie moyenne* is found to be 45 years, and the *vie probable* 55 years *; the effect of decreasing population being probably augmented by the frequent migration of young Helvetians, and their returning home in mature age, when competence for retirement from busy life has been acquired elsewhere. Granting the opposite effects of increasing and of decreasing population, it is difficult to believe that the point of actual coinci-

* See M. Quetelet's "*Recherches sur la Population, &c. dans le Royaume des Pays-bas*," p. 32 [100,000—77,507 = 22,493]; and it is proper to add, that the mortality of the first year of life is not affected by his *L'Hypothese d'une population stationnaire*, which invalidates all his calculations of mortality, except that of the first year of life.

* Sir Francis D'Ivernois, *Sur la Mortalité proportionelle de quelques populations*, 1832.

dence is not also that of stationary population.

2. Further, I have to suggest, that as the mortality which occurs in every year of life settles the age of the dead definitively in that year, their *vie moyenne* and *vie probable* are no longer subject to doubt or calculation, and are evidently the same. By an equal division of the number of all the individuals who have died at various ages*, the particular age or middle point will be found, on either side of which a preponderance of years or age must ensue from the increase or decrease of population; and it is evident that the seeming duration of life, as well as the seeming age at which one-half die, will depart from the truth accordingly.

3. Next let us consider that the entire science which deduces the expectation of human life from the law of mortality, rests upon the average mortality which happens to all collectively: upon the ideal one MAN, who is thus made to represent his whole species; and that the *vie moyenne* and *vie probable* of any one man cannot possibly differ from each other in amount. All scientific attempts to ascertain the law of mortality from national or local mortuary registers, must first assume a stationary population, as an indispensable corrective; and they usually represent it by dividing this ideal MAN into 10,000 parts, and assigning to every age a due apportionment of vitality, as far as facts in the possession of the calculator authorize his conclusions. But the ideal MAN of stationary population seems to me still to retain unaltered his *vie moyenne* and *vie probable*; which, therefore, I hold to be identically the same.

4. The foregoing argument, I think, may be placed in another point of view. Every one, when first he reads or hears of any difference of amount between the average duration of life and the probable extent of life (the *vie moyenne* and *vie probable*), is incredulous, or at least perplexed, until he has tried the experiment on some accredited table of the law of mortality; after which he yields his assent to the result of his own calculation. But when his author tells him that such table is not accurate, *unless* on the hypothesis of stationary population, and does not undertake to assure him that such has been the fact in the nation or city, or other society, from the mortuary register of which the said table has been compiled, the same author tacitly allows that the variation between the *vie moyenne* and *vie probable* may arise from want of certainty in this essential preliminary; a point which seems to need the following illustration.

The condition of stationary population requires that a new person, a new actor, shall be introduced upon the stage of life, whenever and as soon as a vacancy occurs by death of an established actor, whether old or young; and, speaking cumulatively, such deaths constitute the law of mortality in the drama of human life. Supposing no actor to have entered unless on vacancy, nor without notice taken, and regular enrolment of the fact, the *vie moyenne* and *vie probable* of any one of these enrolled actors could not but be identical, and therefore also of all the actors collectively, supposing the process of death and replacement not to have been disturbed by unauthorized absentees or intruders, who, by "their exits and their entrances," cannot but produce a perplexing variation in the average amount of life (*vie moyenne*), and its probable extent (*vie probable*); for it cannot be denied that a superfluity of unnoticed exits and entrances of the young (which represents an increasing population) will sink the *vie probable* towards non-age, and that a superfluity of exits of the old, not replaced by infants (which represents a decreasing population), will enhance it beyond its due amount. Hence it follows that a pretended law of mortality, calculated on a mere mortuary register, will seldom exhibit similitude of amount in the *vie moyenne* and *vie probable*, and *conversely* that a calculation founded on the mortality of a stationary population, will not fail to exhibit an identity of these amounts.

If the foregoing arguments shall be established on higher authority than mine, I think the symmetry of science will be improved, and its consistency established, by ascertaining that an identity of the *vie moyenne* and *vie probable* must occur, if the stationary population has been accurately assumed by the calculator, who will thus be enabled to verify his work. Such consistency or

* See Mr. Milne's process for settling the mortality of Sweden, had the population remained stationary, vol. ii. p. 538.

agreement of the *vie moyenne* and *vie probable* would also tend to improve real science, by manifestly annulling the authority of all tables which purport to assign a known duration of life to France (excepting always the table of Deparcieux), to Holland (excepting that of Kerseboom), to Belgium, to Brandenburgh (North Prussia), and to Switserland; to Paris, to London, to Vienna, to Berlin, to Brussels, and to Amsterdam. These tables, indeed, cannot be again quoted, unless by authors who do not know that such calculations, founded on mortuary registers exclusively, assign forty years as the duration of life in some of the counties of England, but give no more than twenty-four years to Lancashire; and that the *vie moyenne* of North York exceeds that of West York by eleven years, although the climate and manner of living in two adjoining portions of the same county cannot be dissimilar: one of them, indeed (North York), has acquired an increase of population of 21 per cent.; the other (West York) of 73 per cent., since the commencement of the present century *. This brings cause and effect distinctly into view, and shows that instead of inferring the average duration of life from mortuary registers, we should rather attempt to estimate, and even to measure, the probable increase of population from the amount of difference between the *vie moyenne* and *vie probable* ascribed to the inhabitants of places which have produced tables of the expectation of life, constructed on the fallacious basis of mortuary registers exclusively. Science should not be disgraced by referring to such documents for purposes to which they are quite inadequate, and even inapplicable, unless combined with consideration of the increase of population, as well as with the amount of existing population, and its classification into ages suitably to a similar classification of corresponding mortuary registers on which reliance may be placed, or which have been subjected to correction by analogy drawn from well-ascertained facts.

I remain, sir,
Your most obedient servant,
JOHN RICKMAN.

January, 1837.

* See Population Preface of 1831, p. liv.

CASES OF

DISLOCATION OF THE HEAD OF THE FEMUR.

BY THOS. WORMALD, ESQ.

Demonstrator of Anatomy at St. Bartholomew's Hospital, &c. &c.

CASE I.—*Dislocation of the Head of the Femur downwards and backwards upon the Tuber Ischii.*

A MANIAC, who eluded the vigilance of his keepers, leaped from a third story window. Besides dislocating his thigh, he received other injury, of which he died in about an hour.

On examining the dislocated limb it was found considerably shortened and inverted, forming about half a right angle with the body. The shaft of the femur, crossing the symphysis pubis, was fixed immoveably in this situation. As the patient was evidently sinking, no attempt was made at reduction.

Twelve hours after the death of the patient I commenced the dissection, by reflecting the gluteus maximus, when I found some of the fibres of the gluteus

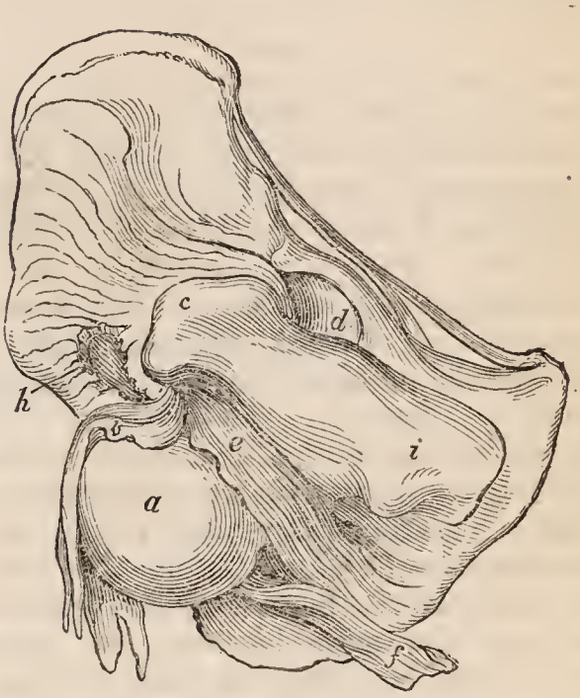

FIG. 1.

A, head of the femur partly covered by B, the obturator internus, the tendinous fibres of which are separated from the muscular. C, the trochanter major concealing a great part of D, the acetabulum. E, the obturator externus crossing the neck of the femur. F, the ischiatic nerve pressed by the head of the femur against G, the tuber ischii. H, the gluteus medius, partly torn. I, the shaft of the femur much inverted, and crossing the symphysis pubis.

medius and minimus ruptured at their posterior edge. The pyriformis and the gemelli were also partially torn; but the four portions of the tendon of the obturator internus, which pass through the lesser ischiatic notch, were drawn out and separated from their connexions with the muscular fibres.

The head of the femur presented itself through a rent of the capsule, opposite to the upper part of the tuber ischii, above the quadratus, so that the great ischiatic nerve was somewhat displaced, and pressed against the tuber ischii.

In this case there was no difficulty in detecting the nature of the injury, as, besides the symptoms already described, the head of the femur could be felt resting on the tuber, covered by the outer edge of the gluteus maximus. If this patient had been in a condition to attempt reduction of the dislocation,—by fixing the pelvis and employing extension in the direction of the shaft of the bone, at the same time everting the limb, the head of the femur would have been brought opposite to the rent in the capsule, and would in all probability have been replaced in the acetabulum without greater difficulty than is usually experienced.

Case II.—*Dislocation of the Head of the Femur, with displacement of a portion of the Cotyloid Ligament, without Rupture of the Ligamentum Teres.*

During the summer of 1829, a man about 40 years of age was admitted into St. Bartholomew's Hospital, labouring under pneumonia, of which he died. On examining his body, I observed that the left limb was somewhat everted, a little separated from the right, and shortened to the extent of half an inch. The head of the bone could be felt resting upon the ileim, between the acetabulum and the anterior inferior spine. On dissecting the muscles about the hip-joint, I found them in a healthy condition, excepting the obturator externus, which was small, of a brown colour, with fat deposited between its fibres, and the tendon was torn from its attachment to the femur. The head of the femur, surrounded by the capsular ligament, rested upon the ileim, between the acetabulum and the anterior inferior spine, in a cavity which was there formed, partly by a preternatural growth of bone, and partly by what appeared to me to be the upper position of the original cotyloid ligament, which was probably displaced at the time of the accident. The original acetabulum was contracted and filled up by a fibrous substance. The ligamentum teres was entire, elongated, and flattened. The cartilage covering the head of the femur was in its natural condition, where it was in contact with the cavity in which it was lodged; but at the rotular aspect of the head of the bone, the cartilage was irregularly absorbed.

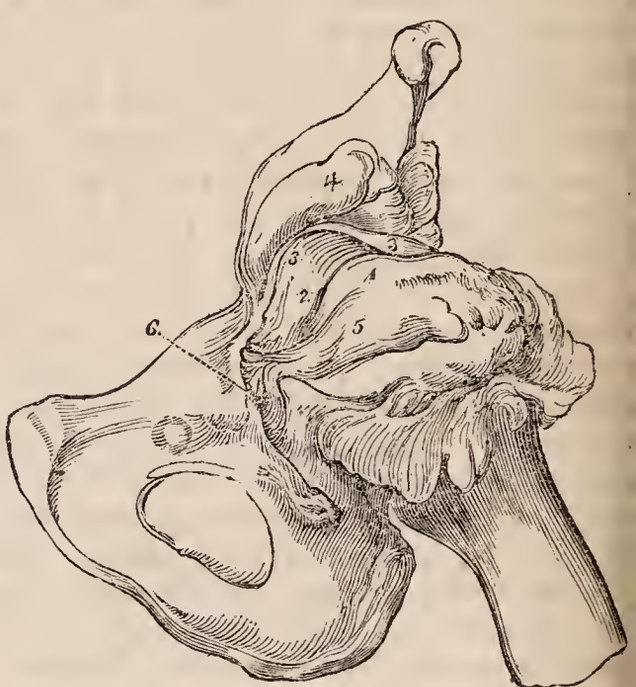

Fig. 2.

The head of the thigh bone (1) separated from the new cavity (2), which is bounded superiorly by the cotyloid ligament (33), and a preternatural growth of bone (4). The ligamentum teres (5) attached at one extremity to the head of the femur, at the other to each side of the notch of the acetabulum (6).

On inquiring into the history of this case, I ascertained, that when the subject was about fourteen years of age, he fell from a ladder, which produced the injury I have described. At the time of the accident, he experienced considerable pain, and for many months much difficulty in walking; but he eventually recovered, and at the time of the attack of inflammation, which destroyed him, he was actually engaged in carrying out beer for a publican who resided in Portugal-street.

In this case, at the time of the accident, the cotyloid ligament must have been partially separated, and probably

a portion of the acetabulum was separated at the same time, which would allow the head of the bone to occupy the situation which it maintained, without the ligamentum teres being necessarily ruptured. I cannot conceive it possible that any dislocation can take place without rupture of the ligamentum teres, provided it be of the usual length, unless, indeed, a portion of the acetabulum be separated at the same time. In all the other cases which have come under my observation, where there has been fracture of the acetabulum, with displacement of the head of the femur, the ligamentum teres has been destroyed. In this case, had any attempt been made to replace the head of the femur, perhaps much difficulty might have occurred in keeping it in its position, as in cases where the acetabulum has been fractured, although the head of the femur has been readily replaced, I have seen it impossible to maintain it in its proper position. This difficulty, I apprehend, will depend upon the size of the portion of the acebulum which is separated.

MIDWIFERY PRACTICE.

PLACENTAL PRESENTATION AND EXPULSION.

To the Editor of the Medical Gazette.

SIR,

THE interesting communication of Mr. Bull, inserted in the last number of your useful publication, relative to the expulsion of the placenta whilst the fœtus remained *in utero*, brings to my recollection a similar case which occurred to me some time since, and which was attended with very extraordinary circumstances.

My attendance was requested on a woman named Phipps, about 38 years old, a patient belonging to the East London Lying-in Institution, who was reported to have suffered the pains of parturition for some hours. On having recourse to the usual vaginal examination, a substance possessing the characteristic peculiarities of the placenta was discovered occupying the vagina, being at the same time entirely extra-uterine. I could hardly imagine it to be the placental mass, as there was scarcely any attendant hæmorrhage. A more particular examination, however, soon satisfied me as to its reality, and that, moreover, there existed an arm presentation. The liquor amnii had been discharged, and the os uteri was fully dilated. The operation of version was immediately attempted to be performed; but so firmly was the fœtal body embraced by the uterus, that it would have been impossible to have effected it without risking the infliction of severe injury upon that organ.

In this most unenviable position I requested the co-operation of my experienced friend and neighbour, the late Mr. Bennett, senior, who also endeavoured to reach the feet of the child, but his efforts were alike ineffectual. He coincided with me in the opinion that the woman ought to be delivered as soon as it could be accomplished with safety, as it was evident that we were indebted for the absence of hæmorrhage to the unusual contractile power exerted by the uterus; and that any sudden or gradual diminution of its contractility, although it might facilitate the operation of turning, yet would in all probability give rise to a copious hæmorrhage, highly dangerous to the life of the patient; and as the want of pulsation in the umbilical cord demonstrated that the fœtus no longer possessed vitality, it was therefore determined to eviscerate the chest and abdomen, according to the plan proposed by Douglas, of Dublin. The operation was immediately commenced, and after the necessary interval the delivery completed.

On the third day after the operation some symptoms of uterine inflammation were experienced, which soon yielded to venesection, leeching, fomentations, with the free exhibition of calomel, opium, and tartarized antimony, &c. At the expiration of seven or eight days all dangerous symptoms had disappeared. She perfectly recovered.

What renders this case so remarkable is the almost incredible fact, that there was no more hæmorrhage than in an ordinary parturition; and the deficiency of this formidable symptom can only be attributed to the powerful contraction which the uterus so beneficially exerted on the fœtal body. It may be proper to remark, that the placenta was completely expelled from the vagina before

the operation. It was nearly of the natural size.—I am, sir,

Your obedient servant,

EDWARD AUGUSTUS CORY,
M.R.C.S., Surgeon to the E. L. Lying in Institution.

Cannon-Street Road.
St. George's East, Jan. 24, 1837.

EFFICACY OF CHLORINE IN SCARLATINA.

To the Editor of the Medical Gazette.

SIR,

OWING to the constant prevalence of scarlet fever, I am induced again to call the attention of the profession to the employment of chlorine in this too often fatal disease. A few years ago, when I resided at Bromley, in Kent, I published in the MEDICAL GAZETTE some very remarkable cases of scarlatina, treated by my partner, Mr. Williams, and myself, in which the chlorine appeared to be highly useful. Not having the GAZETTE by me, I cannot recollect the exact time, but I think it was in September, 1830. However, I will venture to trouble you again with the particulars of one very striking case. It was that of a young woman in the service of Lord Farnborough. She had been to visit her parents in the country. Whilst there, her brother and sister died of malignant scarlatina. Soon after her return to Bromley Hill she fell ill, and had the disease in its worst form. I visited her first on a Sunday evening: I gave her an emetic of ipecacuanha, and then directed her to take a glassful of the chlorine mixture as frequently as she could swallow it. Under this treatment the dangerous symptoms soon gave way, and on the Saturday following she was down stairs.

I could relate many more cases, in which equal success attended the use of this medicine. In short, out of a great number of patients who were at that time attacked by the disease, two only died, both in the village of Wickham, one an infant, the other a spoiled child, ten years old, whose parents would not allow either medicine or nourishment to be given against the child's inclination.

I hope I shall be excused for again expressing a wish that medical men will give this medicine a fair trial, as other means so often prove ineffectual. My practice is to give, in the first place, an emetic of ipecacuanha, according to the age of the patient; to avoid active purgatives, which are injurious to children (particularly large doses of calomel); and then to give the chlorine as frequently as possible.

As it appears to me highly important that the chlorine should be well prepared, I will subjoin the formula for that which I use, which was given to me by Mr. Brown, surgeon, at Lewisham:—

℞ Potass. Oxymur. ʒij.; Acid. Muriat., Aquæ Distillat., aa. ℥ij.

The acid and water to be mixed, and the oxymuriate dissolved in them. It is to be kept in a stopper bottle, in a dark place. Two drachms of this solution are to be put into half a pint of distilled water, to make the chlorine mixture.—I remain, sir,

Your obedient servant,

R. T. TAYNTON.

39, Queen Square.
Jan. 25, 1837.

MEDICAL GAZETTE.

Saturday, January 28, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE *BRITISH* MEDICAL ASSOCIATION.

THE proceedings of the "British Medical Association," at Exeter Hall, were at least satisfactory in this respect—they were perfectly explicit.

We confess that we had conceived, in the commencement, some favourable expectations of what might be the result of a well-ordered association of professional men, combined for their mutual advantage: and such, as we understood it, was the rallying principle announced by the managers of this scheme. But they have now thrown off

the mask; nor is it without some feeling of regret and disappointment that we discover what proves to be the real character of the society—a mere political union, distinguished by all the vices of ultra-radicalism.

This being the case, it cannot but be gratifying to every steady member of the profession, to learn that the meeting was what it deserved to be—a miserable failure. Notwithstanding all the previous announcements, and blowing of trumpets — and desperate were the blasts as the time approached—calling upon all persons from the highways and by-ways to be present, and upon all medical pupils to quit their studies and take a part in the proceedings—notwithstanding all these efforts made by interested parties for upwards of three weeks, nothing could be more wretched than the meeting. There were not above a hundred persons collected together, including about a dozen students; and among that hundred, not a soul was there of either name or note, unless we except Drs. J. Johnson, and Anthony Todd Thomson, both of whom felt called upon to protest against a part of the laws, involving a fundamental principle of the society.

Perhaps we should not exactly say that there was nobody else of note there, for we perceive that there were some of the figurants of the late Meade-and-Wakley meeting present; and though the latter eminent performer did not appear in person, he was amply represented in the spirit: the "address" was wholly Wakleyan. The *honourable* member for Finsbury shone conspicuous in every line of it; and it was evident that though for obvious reasons he did not choose to be of the *dramatis personæ* during the evening, the entertainment was got up chiefly under his direction, and that he had been at the rehearsal.

From the first, indeed, it has been notorious, how a certain number of the general practitioners of the borough have been urged on by Wakley to their present awkward predicament: from a mere dinner-party they have been prompted by that worthy to erect themselves into an Association, and to assume a denomination as ridiculous as it is gratuitous. But who except the cajoled themselves, cannot see under whose ill-omened patronage they endeavour to flourish? Why was Exeter Hall left empty, when Wakley lifted his voice so loudly to fill it; when, week after week, the pages of his mercenary journal were devoted to the task of making any kind of muster? Why, simply *because* Wakley thus announced that he had bestowed upon the society his ominous protection: the mark of beast was thenceforth fixed upon it; and its doom is accordingly sealed.

Some eight or ten speakers, of whom, with the exceptions already made, no person has ever heard, engrossed the business of the meeting; and of these, some became dissentients and seceders as soon as the business was opened, and the principles of the *proposed* institution made known. This, however, was by no means extraordinary; for it was impossible that any reasonable man could listen to the farrago of unwarrantable language of which the address was composed, without being disgusted. Nor was the gross inconsistency of this precious document, backed up, as it professes to be, by a body of laws, less evident to any person not wholly blinded by prejudice: witness the abuse heaped on the College of Surgeons for the exclusive system followed in regard to their Council, while the very same principle is adopted by the new society, who are resolved that *their* Council shall consist of general practitioners only, to the exclusion of all physicians and surgeons!

"I hate the very name of a physician," was the appropriate sentiment

uttered in the course of the evening by a Mr. Body (or Boddy), and we give the gentleman credit for speaking out his mind more candidly than several who went "about it, and about it," in a more cautious, but not less significant manner; though we think it rather insulting to the chairman himself—a Doctor!

Among the speakers, we observe that the Chairman was by far the most considerable, both as regards quantity of talk and boldness of assertion. We suppose it was for these qualities, though, under ordinary circumstances, they are not considered as either essential or becoming in the chairman of a meeting, that *Dr.* Webtser was chosen to fill the office. By the way, this reminds us of another remarkable feature in the affair: here was a public meeting at which the whole medical profession was expected—or at least invited, to attend, in order to witness the first grand glorification of the "*British* Medical Association;" the meeting was held in the centre of the metropolis, where we need scarcely say there are many eminent and influential general practitioners, yet *Dr.* Webster had to be brought into town, from Dulwich, to preside! An active president he certainly was: he will excuse us, however, when we assure our readers that we never heard of him before, save through his after-dinner speech at the Tavern in the Borough. But to return to the *Doctor's* chairmanship. To notice even a tithe of the intrepid things uttered by *Dr.* Webster *ex cathedra*, would require time and space which we regret we cannot spare for such a purpose; but a specimen may be given without occupying much room.

The grievances of the Licentiates of the College of Physicians make a prime topic in the address: the "long degraded and insulted licentiates" are brought in compassionately to adorn the rhetoric of the council; and the chairman frequently reverts to the said grievances with more sympathy than consideration. Now we have no intention of defending, nor did we ever defend, the College system in regard to disabilities affecting the licentiates as a body: but a sense of truth and justice will not allow us to pass over at least one of the degradations which *Dr.* Webster supposes to attach to them. Among other things he asserted roundly and repeatedly, that it rarely falls to the lot of a licentiate to be a court physician. What is the fact? Let us enumerate. Sir Walter Farquhar was a licentiate and very influential court physician; Sir Gilbert Blane was also a physician in ordinary; Sir Matthew Tierney, Dr. Southey, Sir Charles Clarke, and Dr. Locock, are court physicians; and although some of them have since their appointment been made Fellows, yet, with the exception of Dr. Southey's case, this had nothing whatever to do with the circumstance of their being physicians to the court. Again, Sir William Knighton, the most confidential of all the attendants on Royalty in modern times, lived and died a licentiate. Dr. Clark, a licentiate, is physician to the Heiress presumptive of the throne; and in the person of Dr J. Johnson, then in his presence, the chairman had an opportunity of beholding a licentiate who is one of the physicians to his present Majesty. So much for the doctrine of *Dr.* Webster, that a licentiate rarely becomes a court physician!

But what a mockery is it that sympathies should thus be professed for a learned body, by an association which refuses to let any of the supposed injured persons sit on their own council, and which disclaims for itself every thing like a literary and scientific character. The fact were incredible that there should be such an association of members of

the profession attempted to be established in times like these, were it not distinctly avowed by the whole tenor of the proceedings, that the object of the new society is in no respect connected with the promotion of medical science, its purpose being purely political—to abolish all distinctions in the profession — to keep all on the same level, and prevent the possibility of any one exciting the envy of his disappointed neighbour by attaining pre-eminence. And this is what is called the *British* Medical Association, — as if it either had any one medical object in view calculated to produce general sympathy, or was ever likely to embrace even a considerable number, much less the great body, of practitioners throughout Great Britain.

We have ever been willing, and shall always be ready, to support any really liberal and general institution, based upon broad and manly principles; but we shall always repudiate every spurious off-shoot of radicalism that thrusts itself into notice by attempting to pull down whatever is respectable in the profession, and which, without drawing any line of distinction between the good and the bad, openly hugs and clings to those very vices which it condemns in others. More particularly shall we ever use our most strenuous endeavours to discountenance, and in every way to defeat, any project covertly supported by that party which got up the Meade-and-Wakley Crown and Anchor meeting of last year, and which bears, so conspicuously branded upon it, its appropriate motto—"Evil, be thou my good."

But whether we give it the benefit of our opposition or not, it is satisfactory to know, from the issue of all previous schemes projected by the same party, that a *Wakleian* Medical Association always carries within it the elements of its own destruction. It will in the end share the fate of the Wakleian College of Medicine, and those other politico-medical humbugs originating in the same source, all of which have vanished into oblivion through the gate of disrepute and infamy. The founder, of course, cares for none of those things, so as his purpose of the hour is answered.

INSPECTOR OF ANATOMY.

We understand that the Inspectorship of Anatomy for Scotland, previously held by Dr. Craigie, has been conferred on Dr. James Somerville, in addition to that for England.

ROYAL INSTITUTION.

Friday, Jan. 20, 1837.

Dr. Faraday on a new General Law of Matter.

The series of evening meetings for the season was opened by Dr. Faraday, who delivered a very interesting lecture. He chose for his subject the new general principle of matter demonstrated recently by Mossoti. It had been long suspected by some of the most enlightened minds, that there was still some great general law to be discovered, which should embrace and explain all the known phenomena of gravitation, the attraction and repulsion of the particles of solids and fluids, and electricity. Dr. Roget, among others, above ten years since distinctly alluded to the probable existence of such a law, and shewed how, on a certain hypothesis, the powers in existence, which seemed independent of each other, might be all comprehended under one general force. This, however, which had till lately been only conjectured, has now been proved by a train of strict mathematical reasoning, similar to that by which Newton demonstrated his principle of gravitation. Dr. Faraday, in order to render Mossoti's discovery intelligible, performed a beautiful set of experiments, in which the phenomena of gravitation, attraction, and repulsion, and electricity, which seemed most independent of each other, were exhibited, and in the end pointed out how they were all reconciled by Mossoti's law. We cannot undertake here to give more than a general idea of the new principle, which even the accomplished lecturer himself scarcely hoped to render thoroughly understood. It supposes the existence of a universal ether, which pervades all bodies, and constitutes

around every particle of matter a distinct atmosphere.

All the physiological phenomena with which we are acquainted can be accounted for by the properties of this etherial medium, and so comprehensive are they, that gravitation sinks into a mere fraction of the newly-discovered force. Another consequence of the new law will be to abolish the theory of two fluids being concerned in electrical appearances. Franklin's hypothesis of a single fluid will doubtless henceforward be generally adopted, to the exclusion of the other assumption so strenuously supported by Poisson, Bequerel, and the French school generally.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

MR. EARLE, PRESIDENT, IN THE CHAIR.

Tuesday, January 24, 1837.

THE discussion of Dr. Weatherhead's paper (see the analysis of it in our last number) constituted the business of the evening.

Dr. JOHNSON commenced by complimenting the author on the ingenuity with which he had woven a handsome tissue or web from yarns that had been spun by various hands. He quite agreed with Dr. W. in giving the nervous system the initiative in the production of inflammation; but he thought that Dr. W. had offered no proofs of such precedence. The author had taken the old definition of inflammation for his text,—rubor, calor, dolor, tumor,—deducing each succeeding phenomenon from its predecessor. Dr. J. contended that the very first link in the chain was omitted, and that that link was just as capable of demonstration as any of the others. The *rubor*, with which Dr. W.'s definition commenced, offered no necessary proof of connexion with the nervous phenomena, since a dead tissue might be reddened, and even healed, by the injection of blood or wax. He would take Dr. W.'s two illustrations—blushing and blistering. Was it not perfectly evident that a mental impression—nay, an excitement of the general vascular system, preceded the capillary injection of the cheeks? But the second illustration would be still more in point. Let Dr. W., or any other gentleman, paint a patch on his arm with the liquor lyttæ, and watch the phenomena. Long before any redness appeared, there would be a *morbid sensation* in the part, after which the usual signs of vascular action would take place. The *first* phenomenon of inflammation, he contended, whether induced by art or arising spontaneously, was *læsio sensibilitatis*,—a phenomenon as well ascertained, and as clearly demonstrable, as any of the other four links in the chain of phlogosis. Gout, erysipelas—every kind of inflammation—presented the læsio sensibilitatis before any of the vascular signs occurred. So far he hoped he had assisted in establishing Dr. Weatherhead's theory; but there were other points in which he (Dr. J.) could not agree.

Dr. W. believed that *suppuration* was a *mere separation* or infiltration of the serum, and other constituents of the blood, into the inflamed part, and that the *pus* was formed by a combination of its elements *out of the vessels*. Dr. W. supported this doctrine by an experiment of Van Swieten, who observed that the discharge from an ulcered surface was clear at first, and took on the puriform appearance subsequently. He also noticed cow-pox, chicken-pox, and small-pox, where the vesicles at first contained clear lymph, which was afterwards changed into pus; but he relied much on the analogy of the secretions, all of which he (Dr. W.) maintained were mere separations or filtrations from the blood, the elementary constituents of each secretion combining afterwards, and forming bile, semen, &c. &c.

To this doctrine Dr. JOHNSON demurred. He contended that suppuration was a specific action of the inflamed vessels, and that pus was formed by the vessels and deposited in the part—not a fortuitous combination of elements. In support of the same argument, Dr. W. indeed leaned upon the fact, that pus was sometimes found in the blood, and that bile was *secreted* by the kidney. Dr. J. denied that pus had been found in the blood, except where there had been phlebitis, and consequently where there was secretion of purulent matter. He (Dr. J.) also denied that bile was ever found in the blood, or in the urine, except this fluid was resorbed from the liver, as in jaundice, hepatic obstructions, &c. The resorbed fluid was carried into the torrent of the circulation, and thrown off, not secreted by the kidneys.

Dr. WEATHERHEAD replied, and observed that he purposely avoided any reference to the phenomena of the nervous system, as the first step of inflammation, because we knew very little of the nervous or initiatory movements in inflammation, or other morbid processes. He still defended his position, that suppuration was a separation, not a secretion; and that what are called secretions and excretions, as bile, urine, &c., are mere filtering of their elements from the glands, which filterings combine

and form the peculiar seeretions in the diffcrent reservoirs.

Mr. Macilwain spoke at great length, and generally against the doctrines laid down in the paper. He particularly denied that there was any proof of a stasis in the blood of an inflamed part; but, on the eontrary, that there was every reason to suppose the blood was accelerated, rather than retarded, in the phlogosed structures.

Mr. Howship advocated the doctrine of *stasis* in the vessels during inflammation, and referred to the experiments of Drs. Philip and Hastings, on the eireulation in a frog's foot, when irritated and inflamed.

Dr. Clendinning made some remarks on the diminished velocity of the blood in inflamed parts.

Mr. Earle, in noticing Dr. Johnson's observation respeeting *lesio sensibilitatis*, referred to a paper of his in the Medico-Chirurgical Transactions, vol. 7; and concluded the discussion by relating a ease which occurred in his praetice at St. Bartholomew's Hospital. To this we may have another opportunity of recurring.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture IV.

General treatment of Fever—Dietetic management—The Starvation system may produce Organic Disease — Proper Food for Fever Patients and Convalescents — Allaying of thirst—Sedatives—Expergefacients—Efficacy of Green Tea in a case of Narcotism—Flagellation effectual in a case of Poisoning with Opium.

At my last lecture I spoke of some preparatory steps which should be taken before you enter on the treatment of a case of fever. I stated that one of the most essential requisites was a good nurse; that you can readily find persons to undertake this office in every family, but that it is rare to meet with any individual among the patient's relatives properly qualified to discharge so important a duty. There is a vast difference between readiness to undertake and ability to perform. Some persons are always a-doing, but never do, right; always attempting, but never successful. There are many nurses who are extremely attentive, but inexpert and injudicious, and their ill-judged attentions are frequently prejudicial to the patient. A fever-nurse has a vast deal in her power: if an enema is to be administered, the patient will be much less disturbed and annoyed than if it were given by an unskilful person. The mere handling of a patient—the moving of him from one bed to another—the simple act of giving him medicine or drink—the ehanging of his sheets and linen—the dressing of his blisters—and a thousand other offices, can be performed with advantage only by an experienced nurse. Always bear in mind that it is of the utmost importance to economize the patient's strength in fever. The very act of lifting him up, or moving him from one side to another, tends to produce exhaustion. In the advanced stages of fever, the services of a properly qualified nurse are inestimable. Then there is the moral management of the patient, and this is an office which no one can undertake unless qualified by experience, and a correct knowledge of the habits of persons labouring under such forms of disease. Every one admits the value of moral superintendence in the treatment of the insane. Now there are very few patients who are not in a state analogous to insanity, for a longer or shorter period, during the course of typhus fever. There is a necessity for moral management in fever as well as in insanity, and this is understood only by an experienced nurse. Friends or relatives are seldom found capable of discharging this office. If they ehance to discover from the physician's remarks, or questions, the weak points of the patient's case, they generally contrive to let him know them in some way or other. If the patient is restless, for instance, the ill-judged anxiety of his friends will most certainly prevent him from sleeping. They steal softly to his bed, draw the curtains, move the candle so as to make the light fall on his eyes, and wake him perhaps at the moment he is settling down to rest. If he happens to take an opiate, and that they are aware of the nature of his medicine, they inform him of it, and his anxiety for sleep, conjoined with their inquiries, prevent its due operation. Hence, when you prescribe an opiate, you should not, in many cases, say any thing about it; and it should not be administered in such a way as to lead the patient or his friends to expect any decided benefit from it. It is only where I have to deal with prudent persons that I break through my rule of concealing both the nature of the medicine and the results which I expect from its operation. One of the best ways of giving an opiate is to

administer it in the form of an enema. The patient's attention is then turned away from the consideration of loss of rest—he supposes that the enema is to act on his bowels, and in expecting a motion he drops asleep. You will often, too, succeed in producing sleep in this way, where you would fail in bringing it on by an opiate administered by the mouth. Another recommendation attached to this mode of exhibiting opiates, is, that it can be employed in cases of delirium, where the patient obstinately refuses to swallow any kind of medicine. Let me give you here another caution. Do not let the patient know the situation or extent of his danger, however you may feel bound to act in reference to these matters towards his relatives or friends. If you apprehend mischief in the brain, do not commence by examining the head, or putting your questions in such a manner as to lead him to suspect the seat and nature of the affection. The same remark may be applied to the examination of the thorax and abdomen.

At my last lecture I endeavoured to impress upon you the fact that there can be no doubt that persons have been occasionally starved to death in fever; and laid before you some remarkable facts connected with the influence of protracted abstinence on the general system, as well as on the brain and digestive tube. I endeavoured to show that long-continued denial or want of food generates symptoms bearing a very close resemblance to those which are observed in the worst forms of typhus. Pain of the stomach, epigastric tenderness, thirst, vomiting, determination of blood to the brain, suffusion of the eyes, headache, sleeplessness, and finally furious delirium, are the symptoms of protracted abstinence; and to these we may add, tendency to putrefaction of the animal tissues, chiefly shown by the spontaneous occurrence of gangrene of the lungs. It has been shown by M. Guislain, physician to the hospital for the insane, at Gand, that, in many instances, gangrene of the lungs has occurred in insane patients who have obstinately refused to take food. Out of thirteen patients who died of inanition, nine had gangrene of the lungs. You perceive, then, that starvation may give rise to symptoms of gastric disease, to symptoms of cerebral derangement, and to mortification of the pulmonary tissue. It is not, therefore, wrong to suppose that when a system of rigorous abstinence has been observed in fever, and when food has been too long withheld, because, forsooth, the patient does not call for it, and because his natural sensibilities are blunted and impaired—it is not, I say, unreasonable to suppose that gastric, cerebral, and even pulmonary symptoms may supervene, analogous to those which result from actual starvation.

An attentive consideration of the foregoing arguments has led me, in the treatment of long fevers, to adopt the advice of a country physician of great shrewdness, who advised me never to let my patients die of starvation. If I have more success than others in the treatment of fever, I think it is owing in a great degree to the adoption of this advice. I must, however, observe, that great discrimination is required in the choice of food. Although you will not let your patients starve, do not fall into the opposite extreme: you must take care not to overload the stomach. When this is done, gastro-enteric irritation, tympanitis, inflammation, and exasperated febrile action, are the consequences. I have witnessed many instances of the danger of repletion in febrile diseases. A case of this kind occurred some time back in this hospital, in a boy who was recovering from peritonitis. In another case, in private practice, an incautious indulgence in the use of animal food was followed by a fatal result. A young lady ate some beef-steak, contrary to my orders, at an early period of convalescence from fever, relapsed almost immediately, and died in thirty-six hours. Food must be given with great care and judgment, particularly in the beginning of fever. For the first three or four days, particularly if the patient is young and robust, water, weak barley-water, and whey, will be sufficient. After this I am in the habit of beginning with some mild nutriment. What I generally give is some well-boiled gruel, made of groats, and flavoured, if there be no tendency to diarrhœa, with sugar and a small quantity of lemon-juice. The ordinary oatmeal gruel does not answer sufficiently well for this purpose, for it is apt to produce griping and diarrhœa, symptoms which are extremely disagreeable in the commencement of fever, and which often lead to others of a more troublesome and formidable character. I am also much in the habit of giving a little thin panado, morning and evening, during the latter part of the first, and the beginning of the middle, stage of fever. A small slice of bread is slightly toasted, and boiling water is poured on a table-spoonful of the crumbs, in sufficient quantity to make a thin panado, of which the patient takes a table-spoonful two or three times a day. It may be flavoured with a very small quantity of lemon-juice and sugar, if there is no tendency to diarrhœa; but where this exists, or where you are administering mercurials, I think you should

be cautious in the use of acids. Although medical men are of late rather less cautious in giving acids during the use of mercurials, I think the practice is not entirely devoid of danger, and I think our predecessors were right in withholding them under such circumstances. You will begin, then, on the third, fourth, or fifth day, according to circumstances, with a little gruel; and after two or three days you may add a little panado, giving, as I have already observed, a spoonful of either every third hour. As the fever advances you may add some mild animal jelly or broth; and one of the best kinds of nutriment in the middle and latter stages of fever, is chicken-broth. I do not speak here of chicken-water; I mean good and well-made chicken-broth. Give this, but give it in small quantities, and with great caution, at first. Watch the effects of the few first spoonfuls; it may act injuriously, and you should give it up, at least for some time, if it produces any bad effects. If it brings on heaviness, sickness of stomach, flushing of the face, excitement of pulse, and increased feverishness, give it up, and return for some time to the gruel and panado. You can try it again in a day or two; for although your patient does not bear it to-day, he may to-morrow, or the day after; and it is a most fortunate circumstance when it agrees with him, for, as I have already observed, it is the best kind of nutriment you can give in the middle and latter stages of fever. The best mode of giving it is to make the patient take a table-spoonful of it regularly every third hour, or oftener if necessary.

Recollecting the tendency to diarrhœa and intestinal irritation in fever, you will be extremely cautious in allowing your patient the use of fruits. Indulging patients in the use of grapes and oranges is a very popular, but, in my mind, very hazardous and improper custom. I have on many occasions seen persons injured by fruits of this description. Stewed and roasted apples are still more dangerous; they are apt to produce tormina, flatulence, diarrhœa, and intestinal inflammation. All acid or raw fruits have a tendency to produce irritation of the stomach and bowels, and should be avoided altogether, or very sparingly used.

One general observation as to the administration of food and nutriment in fever. All kinds of food and nutriment should be given by day, and the patient should, if possible, be restricted to the use of fluids by night. The natural habit is to take food by day and not by night, and in sickness, as well as in health, we should observe the natural habits of the economy. With respect to drinks, the mildest, of course, should be preferred: on this point most persons are generally agreed, and it will be unnecessary for me to detain you with any particular observations. There is one error, however, which is very frequently committed in the use of drinks in fever: patients are generally allowed to drink too much. It may be urged that they have a strong desire for fluids; but they should not be gratified in every thing they wish for. They labour under a constant state of nervous irritation and restlessness, and will beg of you to do twenty different things to relieve their immediate feelings; but it would be just as improper to give them large quantities of drink every time they desire or call for it, as to indulge them in any momentary whim which may be the offspring of their disordered and changeable fancy. The continued swilling of even the most innocent fluids will bring on heaviness of stomach, nausea, pain, and flatulence, and predisposes to congestion and intestinal irritation. From the mere ingestion of a large quantity of the simplest fluid, you will frequently see well-marked symptoms of gastric irritation arise during the course of fever. This is not a picture drawn from imagination; I have witnessed it on many occasions during the course of my practice. It is extremely painful, indeed, to be obliged to refuse drink to a patient labouring under intense thirst; but you should never allow them to take a large quantity of fluid at a time: you should impress upon them the danger attendant on such a practice, and tell them that a spoonful or two, swallowed slowly, allays thirst more effectually than drinking a pint at a time. The sensation of thirst, as you all know, is almost entirely confined to the fauces and upper part of the pharynx, and it is as much relieved by a small quantity swallowed slowly and gradually, as by a large quantity gulped down at once.

Besides the simple fluids, there are other drinks required in fever. Beer, ale, porter, wine, tea, and coffee, are also frequently used in the treatment of fever, and are of the utmost value when employed on appropriate occasions; they are adjuvants of the highest importance in the dietetic management of fever, and it will require some time to explain the rules by which you should be guided in their administration. I shall therefore speak of them according to the indications with which they are given; and, first, of tea and coffee. You are aware that we are constantly in the habit of ordering medicines to diminish nervous irritation or restlessness, and to procure sleep; but I believe we are not much in the habit of prescribing remedies which produce an opposite state of the system. We give sedatives and narcotics

to tranquillize, to produce a species of exhaustion of the mental faculties, and to bring on sleep; and I do not see any reason why we should not also administer expergefacients, or remedies calculated to maintain intellectual activity, and keep the patient awake. Among those remedies which are most frequently employed for the latter purpose, are tea and coffee. You have lately seen the use we made of an infusion of green tea, in a case of narcotism which occurred in the fever ward. A man who was in the latter stage of fever, and labouring under great nervous excitement and total loss of sleep, was ordered an opiate enema, after we had tried various other means without success. During the course of the evening he got twelve drops of black drop, with two ounces of mucilage of starch, in the form of enema, and soon after fell into a sound sleep. When we came next morning and inquired after him, every thing was reported to have gone on well; the opiate enema had answered the purpose completely, and the man was still sleeping soundly. We found, however, on a more accurate examination, that he was in a kind of lethargic state, and could scarcely be roused. When addressed in a loud tone of voice, he raised himself heavily and slowly, half opened his eyes, gave a brief answer to our questions, and then, leaning back on his pillow, dropped asleep. Observe here the danger connected with this state. He was in an advanced stage of fever, had been restless and sleepless, and had suddenly passed to an opposite state. The rapidity with which coma had supervened on sleeplessness, and the danger of fatal congestion of the brain coming on, gave me considerable alarm. There was no use, however, in thinking of what had been done; the man's state called for prompt and decided measures, and we proceeded at once to attack the symptoms of our own creation. One of the gentlemen went down and got some green tea, of which he made a strong infusion, and administered a strong dose of it to the patient. This had the desired effect; the symptoms of coma gradually disappeared, and when I came to see him in the afternoon, he was quite out of danger. Green tea was first introduced here as an expergefacient in the treatment of coma by Dr. Edward Percival, son to Dr. Percival, of Manchester; and some years back he read a paper at a meeting of the College of Physicians, in which he brought forward several cases of coma and stupor, in which green tea had produced the most favourable effects. On the continent they generally use strong coffee for the same purpose. Whether these beverages produce this effect by their influence on the circulation, or on the nervous system, I am not prepared to say; but there cannot be a doubt of their efficacy and value in many cases of this description; and I am frequently in the habit of using both with this intention.

While on the subject of expergefacients, I shall beg leave to read for you a very curious case from the 13th number of the Boston Medical and Surgical Journal, in which an expergefacient of a less agreeable character was employed to rouse a patient from the lethargic stupor brought on by a large dose of laudanum. There are some transatlantic peculiarities of expression in the detail of this case, but I have no doubt of its being correct. It is entitled "a case of successful treatment by flagellation, where a large dose of laudanum had been taken." And the author, Dr. Joseph Barrett, of Middletown, Connecticut, proceeds as follows:—

"Tincture of opium is not unfrequently resorted to for destructive purposes. It is also, unfortunately, and too frequently, taken by mistake, and proves fatal before efficient means can be adopted to counteract its deleterious effects on the system. I am induced, therefore, to offer a short statement of a case of poisoning with laudanum that fell under my care several years since, for the following reasons: first, the success that attended the mode pursued, and secondly, from not having met with any such means recorded, to my knowledge*, either in works on medicine, or in treatises on poisons."

Observe, gentlemen, it is not I that am speaking here, but Dr. Barrett, of Middletown, Connecticut.

"In the year 1822, February 23d, I was called on to see Mr. Wright Harris, (this was in the state of New York) who had intentionally taken a large dose of laudanum for the purpose of destroying himself. He had committed this act during his absence from home, under circumstances which it is not important to relate. Much time, about three hours, was therefore lost, before any effectual measures could be adopted for his relief. His case, as I found him, appeared to be altogether hopeless. Before my arrival, emetics and various drinks had been tried, besides frictions, and constant, though ineffectual attempts, had been made to irritate the œsophagus by feathers. All these means had failed, and the patient was in such a profound sopor, that apparently nothing but warmth remained to indicate that life had not already become extinct. The quantity of laudanum taken was ascertained to be one ounce and a half. The case appearing so desperate, justified me

* This practice, though not generally adopted, has been recommended by several authors in Europe.

in the course of treatment which I was, under existing circumstances, then obliged to adopt.

"Internal remedies having entirely failed, there was no chance left but for high external excitements. I therefore determined to use vigorous measures. I commenced with flagellations, using long, pliant, fresh twigs to the palms of the hands and soles of the feet. These were briskly applied, and in a short time gave indications of uneasiness and pain. This treatment was unremittingly pursued till the man spoke and complained of being pained by the whipping, when this severe appliance was relaxed; but on so doing, he instantly sunk into a profound stupor, from which he was again only roused by the severity of the whipping. It required the aid of a number of men to take turns in the flagellation, as well as to support and walk him about; for a cessation of the use of the rods was followed by instantaneous stupor. After about six or eight hours under this course, the stupor was lessened, and the severity of the flagellation mitigated; but as the case required constant high excitement, it was still repeated at intervals, till eventually the exercise of walking was sufficient to keep him awake. This was in about twelve hours from the commencing with the flagellation. He afterwards experienced but little inconvenience from his hands and feet, and was perfectly restored in a few days to his usual health. I would here state that the first proposal made by me to adopt flagellation as the only hope, was objected to by the persons present, from its carrying with it the semblance of unkindness towards what was regarded by them as a corpse; and it was not till the appliance of the rods by myself, in the first instance, that I obtained the aid of those present; but as soon as the patient began to move, and at last spoke, they took hold with alacrity, and by dividing themselves into relief parties, they very cheerfully, and rather amusingly, kept up the castigation so long as the state of the patient required it at their hands. He by no means seemed to relish this harsh proceeding, and in return gave his attendants several severe blows. If while lifting his arm to give a blow, the flagellation was then entirely suspended, the arm would instantly sink powerless; to such a degree had the effects of the narcotic drug prevailed over the nervous system, that nothing but the torture of the rods could rouse him. On his recovery, it was said that the man's wife was highly satisfied with this remedial course, which was believed to have a good effect upon his subsequent conduct."

UNIVERSITY COLLEGE, AND NORTH LONDON HOSPITAL.

Dr. A. T. Thomson.

[Being in possession of Observer's name and address, immediately on receiving Mr. Lewis's letter we communicated it to our correspondent, and are thus enabled to lay both reply and rejoinder before the reader. For ourselves, we know nothing of the circumstances; but with regard to the respective writers, we may state that while both are pupils of the hospital, Observer is the senior, and may be considered as having had more experience than Mr. Lewis.—Ed. Gaz.]

To the Editor of the Medical Gazette.

Sir,

A friend pointed out to me a letter in your last number, concerning Dr. A. T. Thomson, which, as containing so many absurdities and falsehoods, I hardly think it worth while to reply to; nor, in fact, should I do so, were it not for the sake of those who may be strangers to Dr. Thomson and the North London Hospital. Holding the office that I do, in the hospital, under Dr. T., I am likely to have proper information on the subject. I doubt if your correspondent "Observer" has. I will take the charges *seriatim*, and reply to them in as few words as possible. The first question — Is not his absence (Dr. Thomson's) from the hospital during the days he should visit his patients, not an occasional, but a constant occurrence? is *totally false*.—During the last three months that I have been Dr. Thomson's clinical clerk, he certainly has not absented himself more than twice. I know of only once, and that was caused by illness.

Query 2d.—Is not the hour specified in the prospectuses as the periods he goes round the wards invariably passed before he makes his appearance at the hospital door?—Dr. Thomson is quite as regular in his attendance as any of the other physicians or surgeons of this or any other hospital.

Query 3d —Do not weeks constantly elapse without his delivering a clinical lecture, or even making a clinical remark in his passage round the wards? — Except during the last two or three weeks, when the Doctor has been very much engaged on account of the prevailing epidemic.

Dr. Thomson gives clinical lectures whenever there are cases interesting enough for subjects of clinical instruction.

Hoping you will be impartial enough to

insert the above, in answer to "Observer," I am, sir, yours, &c.

W. A. Lewis, *Clinical Clerk.*

P.S.—It would only be a waste of time to reply to the concluding sentences of "Observer's" letter. He may be sure that the council of the University College are fully competent to judge of the talent and value of the professors, without any hints from anonymous correspondents.

To the Editor of the Medical Gazette.

Sir,

Considering the prodigious excitement under which Mr. Lewis apparently laboured at the time he penned a reply to my former communication, it will doubtless appear bold on my part entering the arena of discussion, having for my antagonist one in such a fearful state of anger as is evidently the clinical clerk to Dr. Thomson, at the North London Hospital.

With regard to the first statement contained in my last letter, and which Mr. Lewis has so unhesitatingly branded with the epithet "totally false," I can only regret that I am unable to bring forward *dates* in support of the accusation; I must therefore trust to assertion, a mode at all times extremely objectionable, yet in the present instance unavoidable—though one, however, in the case before us, in which I have the honour (?) of Mr. Lewis's company. I have frequently waited at the hospital for Dr. Thomson's arrival until half-past twelve (his time for attendance, as posted on the notice-board, being twelve), and after this have left, presuming, as I think, on just grounds, that the patients, such a time having elapsed, would scarcely on that day receive the benefit of his presence.

Mr. Lewis's mode of exculpating Dr. Thomson from the second charge is as novel as it is unsatisfactory. I have yet to learn that the circumstance of some individuals being guilty of sins of omission, is a plea which may be adduced as a means of justification for others. I shall dismiss, therefore, this second part, by merely stating that his reply is but a tacit acknowledgment of the justice of my complaint.

He (Mr. L.) then goes on to state, "that Dr. T. gives clinical lectures whenever there are cases interesting enough for subjects of clinical instruction." Now this, although doubtlessly meant as a justification of Dr. T., is, nevertheless, the unkindest cut of all. Can Mr. Lewis have so taken leave of his senses, as not to perceive that in that very answer, he more than implies a doubt of the Doctor's capabilities. Does he not know that a person possessed of only moderate professional ability is able to throw the charm of interest over even the most simple case of disease? And does he not, moreover, know that such is peculiarly the duty of the hospital physician? for in his future career the student will not find the bulk of his practice made up by cases "interesting enough," as Mr. L. terms them, but by those which would apparently, in his opinion, be devoid of all points of professional attraction. You will instantly perceive, by Mr. Lewis's own assertion, that the Doctor has not lectured for two or three weeks, thus proving most indubitably, as I stated, that weeks elapse without his delivering a clinical lecture, and thus bearing me out in the last assertion. As regards the reason Mr. L. has assigned for this omission, I can only state that I have no knowledge of the extent of Dr. Thomson's private practice, more particularly during those periods when the influenza is prevalent; but I may remark that Dr. Elliotson, Messrs. Cooper and Liston, have all found time to continue uninterruptedly their clinical instructions. In reference to this subject also, I may remark, that to my certain knowledge, on account of the smallness of the hospital, many persons are every week refused admittance; but that among those who make application, those only are selected whose cases, either from severity or rareness of occurrence, present points of interest. With these the wards are always full, as you, Mr. Editor, may convince yourself, by paying any day a visit to the establishment. How, then, does it happen that the cases under Dr. Thomson's care are so devoid of interest, or of practical importance? Perhaps Mr. Lewis can enlighten us on this point. Should he think this communication requires an answer, I shall have much pleasure in again replying to him, but trust he will then bring forward facts; as it is, his present letter has more than once brought to my recollection the old fable—

"Parturiunt montes, nascetur ridiculus mus."

I am, Mr. Editor, as before,
Your obedient servant,
Observer.

University College,
Jan. 26, 1837.

P.S.—As Mr. Lewis has favoured your readers with a postscript, I can only follow a good example. I shall, perhaps, ere long send you a few quotations from my note-book, taken in Dr. Thomson's ward, as well as some specimens of inconsisteney and absurdity extracted from a work on Materia Medica and Therapeutics, by A. T. Thomson, M.D. Professor in the University College.

LIST OF DRUGS,

ON SALE IN THE ENGLISH MARKET,

With their Prices and several Duties.

(From the Official Returns up to Tuesday, Jan. 24, 1837.)

	Price.			Duty.		Duty Paid	
						In 1837 to last week.	Same time last year.
	£ s. d.	£ s. d.		s. d.			
Aloes, Barbadoes, D.P. c	12 0 0	to 30 0 0	B.P. lb	0 2			
Hepatic (dry) BD..... c	5 0 0	14 0 0	F. lb	0 8		6,437	3,701
Cape, BD. c	1 10 0	1 16 0					
Aniseed, Oil of, German, D.P.... lb	0 9 0	0 9 6	F. lb	1 4		—	—
E. I. ..... lb	0 7 0	0 7 6	E. I.	1 4		65	—
Assafœtida, B.D. c	0 2 10	0 5 0	c	6 0		—	—
Balsam, Canada, D.P. ..... lb	0 1 3	0 1 4	lb	0 1		—	—
Copaiba, BD. ..... lb	0 2 6	—	c	4 0		9	8
Peru, BD. ..... lb	0 5 9	—	lb	1 0		94	267
Benzoin (best) BD..... c	25 0 0	50 0 0	c	4 0		—	2
Camphor, unrefined, BD..... c	9 0 0	—	c	1 0		35	2
Cantharides, D.P. ..... lb	0 7 0	—	lb	1 0		1,673	634
Carraway, Oil of, D.P. ..... lb	0 9 0	—	lb	4 0		291	—
Cascarilla or Eleutheria Bark, D.P.C.	1 10 0	—	lb	0 1		—	820
Cassia, Oil of, BD..... lb	0 9 0	—	lb	1 4		352	374
Castor Oil, East India, BD ..... lb	0 0 6	0 0 10	c	1 3		627	104
West I. (bottle) D.P. 1½ lb	0 2 3	—		—			
Castoreum, American ..... lb	1 15 0	—	lb	0 6		45	377
D.P. Hudson's Bay ..... lb	1 0 0	1 4 0					
Russian ..... lb	none						
Catechu, BD. c	1 5 0	1 8 0	c	1 0		3,545	282
Cinchona Bark, Pale (Crown).... lb	0 2 0	0 3 6					
BD. Red ..... lb	0 3 0	0 6 0	lb	0 1		6,811	—
Yellow ..... lb	0 1 10	0 1 11					
Colocynth, Turkey ..... lb	0 2 6	0 4 0	lb	0 2		228	218
D.P. Mogadore ..... lb	0 3 0	—					
Calumba Root, BD. c	1 4 0	2 5 0	lb	0 2		713	1,035
Cubebs, BD. c	3 0 0	—	lb	0 6		1,722	632
Gamboge, BD. c	5 0 0	15 0 0	c	4 0		1	6
Gentian, D.P. c	1 4 0	—	c	4 0		45	36
Guaiacum, D.P..... lb	0 1 0	0 1 8	c	6 0		—	—
Gum Arabic, Turkey, fine, D.P... c	8 0 0	9 0 0					
Do. seconds, D.P. .. c	5 0 0	7 0 0	c	6 0		432	515
Barbary, brown, BD. c	3 19 0	—					
Do. white, D.P..... c	4 15 0	—					
E. I. fine yellow, BD. c	3 10 0	4 10 0	c	6 0		29	22
Do. dark brown, B.D. c	2 0 0	3 5 0					
—— Senegal garblings, D.P. c	5 0 0	5 10 0	c	6 0		—	10
—— Tragacanth, D.P. c	13 0 0	20 0 0	c	6 0		9	—
Iceland Moss (Lichen), D.P. .... lb	0 0 2½	0 0 3	lb	0 1		—	774
Ipecacuanha Root, B.D. ..... lb	0 3 0	—	lb	1 0		815	222
Jalap, BD. ..... lb	0 1 10	—	lb	0 6		3,374	—
Manna, flaky, BD. ..... lb	0 5 9	—					
Sicilian, BD. ..... lb	0 1 9	0 2 0	lb	0 3		1,402	3,615
Musk, China, BD. ..... oz	1 0 0	1 8 0	oz	6 0		138	41
Myrrh, East India, BD. c	5 0 0	14 0 0	c	6 0		10	—
Turkey, BD..... c	2 0 0	11 10 0					
Nux Vomica, BD..... lb	0 8 0	0 9 0	lb	2 6		—	—
Opium, Turkey, BD. ..... lb	0 15 0	0 15 6	lb	1 0		1,667	2,108
Peppermint, Oil of, F. BD..... lb	1 2 0	—	lb	4 0		38	138
Quicksilver, BD. ..... lb	0 3 8	—	lb	0 1		21,467	13,507
Rhubarb, East India, BD..... lb	0 2 0	0 3 6	lb	1 0		2,531	1,221
Dutch, trimmed, D.P. lb	0 3 6	0 4 6	F. lb	1 0		875	185
Russian, BD. ..... lb	0 8 3	—					
Saffron, French, BD. ..... lb	1 1 0	—	lb	1 0		268	120
Spanish ..... lb	1 1 0	—					
Sarsaparilla, Honduras, BD..... lb	0 1 0	0 1 9	lb	0 6		3,407	3,751
Lisbon, BD. ..... lb	0 2 0	—					
Scammony, Smyrna, D.P..... lb	—	—	lb	2 6		839	410
Aleppo ..... lb	0 12 0	0 15 0					
Senna, East India, BD. ..... lb	0 0 3	0 0 4	E.I. lb	0 6		4,752	3,155
Alexandria, D.P..... lb	0 1 6	—					
Smyrna, D.P. ..... lb	0 1 0	0 1 3	Other sorts	0 6		5,828	3,258
Tripoli, D.P. ..... lb	0 1 0	0 1 3					

‡§‡ BD. In Bond.—c. Cwt.—B. P. British Possessions.—F. Foreign.—D. P. Duty paid.

THE LATE DR. MACNISH.

This well-known author died at Glasgow, on the 26th of last month, in the 35th year of his age. The first of his writings which brought him into notice, were the able papers which he contributed to Blackwood, with the signature of "A Modern Pythagorean." But the works which have rendered his name widely celebrated, have been the Anatomy of Drunkenness and the Philosophy of Sleep. These have gone through several editions, both here and in America, and have been translated into most of the continental languages.

His premature death is the more to be regretted, as every successive production of his pen evinced a gradual increase of mental power, which would have enabled him to achieve, had he lived, much more than he has done. He is said to have been carried off, after a few days' illness, by the typhus fever, which is at present so rife in Glasgow.

MEDICAL READING.

During the year 1836 there were published in France alone upwards of 300 volumes on the various branches of medical science. These 300 volumes, added to the numerous brochures, memoirs, and other smaller tracts which have appeared, raise the quantity to upwards of 115,000 pages, which, together with the journals and theses brought out at the same time, render the total above 180,000 pages. Now should there be found a reader intrepid enough to undertake the perusal of all this, his monthly task must be to wade through nearly 16,000 pages, and his daily performance must be on an average 500. So much for French medical literature merely; add English, American, German, &c.!

COLLEGE OF SURGEONS.

The Hunterian Oration will be delivered by Sir Benjamin Brodie, Bart., on Tuesday, the 14th of February next, at five o'clock.

By order,
Edmund Belfour, Sec.

NEW MEDICAL WORKS.

J. Paterson Clark's Treatise on the Teeth and Dentism. Square 12mo. 10s.

Swan's Illustrations of the Comparative Anatomy of the Nervous System. Part II. 4to. 7s.

Phillips's Translation of the New Pharmacopœia Londinensis. 8vo. 10s. 6d.

The Nervous System of the Human Body. By Sir C. Bell. Third edition, 8vo. 24s.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

January 19, 1837.

William Vores, Northampton.
Ambrose Humphrys Ashley, Clifton, Bristol.
Henry Johnson, St. Helen's, Lancashire.
Richard Fell Gregg, Kirkby Lonsdale, Westmorland.
William Birtwhistle, Skipton-in-Craven.
William Goodwin Stone, Wentworth, Yorkshire.
George Willson.
Thomas Edwards, Llansaintffraid, Montgomerysh.
John Moolenburgh Minter, Holland.
William Barney Parkes, Birmingham.

January 26, 1837.

Henry Churchill, Deddington, Oxfordshire.
Edwin Haward, Habsworth, Suffolk.
Rowland William Maxon, Shrewsbury.
John Kendrick, Warrington, Lancashire.
William Armytage Ainley, Delph, Saddleworth.
William Gascoyne Stutter, Bury St. Edmund's.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Jan.* 24, 1837.

Abscess	5	Inflammation	54
Age and Debility	149	Bowels & Stomach	8
Apoplexy	16	Brain	1
Asthma	91	Lungs and Pleura	51
Cancer	1	Influenza	106
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Consumption	126	Liver, diseased	4
Convulsions	52	Locked Jaw	1
Croup	2	Measles	16
Dentition or Teething	10	Mortification	2
Dropsy	24	Paralysis	5
Dropsy in the Brain	14	Small-pox	2
Dropsy on the Chest	3	Sore Throat and Quinsey	1
Epilepsy	2	Spasms	2
Erysipelas	3	Stricture	2
Fever	13	Thrush	1
Fever, Scarlet	1	Tumor	1
Fever, Typhus	2	Venereal	2
Gout	3	Unknown Causes	40
Heart, diseased	7		
Hernia	2	Casualties	4
Hooping Cough	27		

Increase of Burials, as compared with the preceding week . . 394

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1837.	Thermometer.	Barometer.
Thursday . 19	from 30 to 39	29·89 to 29 80
Friday . . 20	30 37	29·71 29·64
Saturday . 21	33 43	29 59 29 54
Sunday . . 22	37 51	29·41 29·28
Monday . . 23	45 51	29·38 29 35
Tuesday . . 24	44 51	29·44 29 57
Wednesday 25	41 44	29·55 29.59

Winds S. and S.E.
Cloudy, with frequent showers of rain.
Rain fallen, ·825 of an inch.

Charles Henry Adams.

Notices.—The sketch of Mr. Liston is too broad and personal for our pages.

A Pupil of the Borough Hospitals, too late for this number.

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 4, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XIX.

Live and Still Births. *Statistics of the still-born — Question of live birth: 1. In Civil cases — Legal distinctions — Law of Tenancy by the Courtesy—How modified by the Cæsarean section—Success of this operation on the Continent, as compared with what has happened here—Notice of a celebrated English case. 2. In Criminal cases—Prolicide.* Abortion or Miscarriage — *Present state of the law on this subject in need of amendment—Objects of inquiry in cases of alleged Abortion—Medico-legal inspection of the Ovum or Fœtus—Examination of the suspected female—Methods usually employed for procuring Abortion — Their precarious effects—Circumstances under which it may be sometimes justifiable to cause miscarriage.*

There remains one other point of view in which the births of children are to be medico-legally considered, and that, though last, far from being least in importance. Whether children are born alive or dead, often becomes a question fraught with the weightiest interest, both before our civil and criminal tribunals; and competent medical evidence can alone give it a satisfactory solution.

LIVE AND STILL BIRTHS.

Statistics.—In the ordinary course of nature a certain proportion of children are still-born. What that proportion is, it may be worth while to inquire, previously to our entering on the consideration of the fact in particular instances. In criminal cases, more especially, it may be important in favour of mothers accused of destroying their offspring, to know that a certain number of children are usually dead before delivery, subject to variation according to the operation of predisposing causes.

M. Quetelet, of Brussels, has made some interesting inquiries on this subject, and has found that there is a material difference in the mortality according as the births take place in cities or in the country, and according to the sexes of the infants. The number of still births occurring in towns is double that in the country; in the latter it is but one in every 31 births, while in the former it is one in about 16; and more boys perish than girls, in the proportion of three to two. Dr. Bück, of Hamburg, confirms those returns: on an average of eight years, he found the number of still-born to be to the number of births as one to 16; but the mortality of males was not quite so much—five to four expressed the ratio.

According to Dr. Denman, the proportion of still-born in this country is, or was, not more than one in 16, or perhaps between that and one in 20. The returns of some of our lying-in institutions have of late given a much lower rate, such as one in 25, or even 28. In Ireland the mortality is greater. We find in Dr. Collins's work, which contains so many valuable statistical facts relating to midwifery practice, that of 16,654 children born in the Dublin Lying-in Hospital, 1121 were still-born, and 614 were males; that is, the still-births were to the entire number of births in the proportion of above one in 15, and the males to the females nearly in the ratio of six to five. Some other facts worth noticing in this place are mentioned by Dr. Collins. Of the 1121 still-born children, 527 were putrid (one in 2·1), and 299 were expelled prematurely (one in 3·8). It is well to have some idea of the

proportion born putrid — namely, about half the number of still-born; for where appearances of uterine putridity are present, the question of live or still-birth can scarcely be entertained, and our duty as medical jurists is accordingly much expedited and abridged.

The general conclusion from these data may be thus briefly expressed. Of the number of children born, from *five* to *seven per cent.* is the proportion of still births; and of these about *half* are putrid, and nearly *a fourth* premature.

1. *In Civil Cases.*

It will be convenient to divide the subject of live and still births, as it may happen to be inquired into, in civil cases or in criminal.

Legal distinctions. — The fact of live birth must be ascertained in all cases where property is transmitted through a new-born child. I have already mentioned that an infant in *ventre sa mère* may become possessed of property as a legatee, may have a surrender of a copyhold estate made to it, or may even take land by descent; but all this on the presumption of its subsequent live birth: hence the importance of being able to determine, in doubtful cases, whether it be live or still-born.

What is to be understood by *live* birth is variously interpreted by civilians and criminalists, and also by the jurists of different countries. Mr. Chitty says, "we would define it to be the arrival of the child at that stage after parturition, when its existence and capacity to continue life, separate and apart from the mother, has been distinctly established; and which consists not merely in breathing, but also in the exercise, at least for once, of all the functions essential to the continuance of life, and, amongst others, principally the circulation of the blood, the existence of which, at least *primâ facie*, is essential to prove the infant's capacity to continue life."

But this limitation of live birth, however applicable to the case of injuries inflicted on the new-born child, implies a much higher standard of vitality than is requisite for securing the privileges of infants in a civil point of view. For the latter purpose it seems sufficient that the infant should exhibit *any* sign of life; nor is it necessary that it should be proved to possess a capacity for continuing to live. In France and other countries, the fact of *viability* must be made apparent, in order to secure the rights and privileges of the child. Here, even in criminal cases, the absence of viability is a circumstance which may or may not be taken into account, at the discretion of the court; but the mere fact of birth, with any appearance, however slight, of not being *still*, is all that is requisite to constitute the infant a transmitter of property.

Law of Tenancy by Courtesy.—There is a curious provision in the arrangements of our common law, for securing certain privileges to a husband who survives the marriage, and has had issue live-born. It may be best explained by an example. A man marries a woman possessed of real or landed property; they have a child, still-born, and the wife afterwards dies. The property will go to the remotest relation of the wife—nay, in default of relations, it will become a forfeiture to the king rather than the husband shall have it. But let us suppose the child born alive, and to have lived even only an instant, the whole affair is altered; the husband then has a claim superior to that of any relative; he has a right to enjoy the property during his life; he becomes, in short, "tenant by the courtesy of the law of England."

In Scotland, in order to establish a tenancy of the kind, it must be proved that the child cried, that being considered requisite as sufficient evidence of vitality. In this country, too, it has been attempted to introduce the same necessary proof, but without success. Lord Coke objected to the position that the crying of the child should be held requisite; but his reason was an odd one—because the child might be deaf and dumb!

There can be no doubt but that the crying of the child after birth would be regarded by a jury as conclusive evidence of its being born alive; but much less proof has sometimes been held sufficient. In a very remarkable case, Fish *v.* Palmer, tried in 1806, the plaintiff had by his wife a child, supposed to be still born: the wife died, and there being no issue of the marriage, the estate went to the wife's brother-in-law. The husband, however, was afterwards induced to contest the fact of the child having been born dead. The accoucheur, Dr. Lyon, had died before the trial, but it appeared in evidence, that he had declared the child to be living an hour before the delivery; and having directed a warm bath to be prepared, gave the child to the nurse to be immersed in it. It neither cried nor moved, nor did it shew any signs of life; but two women swore that, while in the hot water, there twice appeared a twitching and tremulous motion of the lips; and, upon informing Dr. Lyon of this, he desired them to blow into its throat; but it never exhibited any other signs of vitality. Drs. Babington and Haighton, who were examined on the trial, declared that the muscular motion of

the lips could not have happened if the vital principle had been quite extinct, and that, therefore, the child was born alive. Dr. Denman, however, gave a contrary opinion, and declared that the child was not born alive; and he attempted to establish an important distinction between uterine and extra-uterine life, and considered that the tremulous motion of the lips might arise from some remains of the former. The jury, however, did not agree with the latter witness, but found that the child was born alive.

Had Dr. Lyon acted in this case with more promptitude and energy, it is probable he would have saved some litigation; but as it is, the case affords a good illustration of the actual state of the law, and of the importance attaching to contemporaneous evidence. It shews the expediency of taking notes of what occurs at births, especially when children are born in a doubtful condition, or do not at all events live long. The circumstances attending the labour should be noted, and some memorandum preserved of the persons who may happen to be present. There have been instances of accoucheurs, after the lapse of many years, being called on to give evidence before the highest tribunal in the land, concerning births at which they may have assisted, and where the mothers were at the time in an humble rank of life.

It was in contemplation a few years since, among other projected alterations in the laws relating to real property, to render tenancy by the courtesy independent of issue — to enable the husband to become tenant without having had any children by his deceased wife. But no alteration of the kind has taken place; the law remains as it was, allowing the same latitude as ever for medical evidence and judicial discretion.

How modified by the Cæsarean section.— The occurrence of birth through the Cæsarean operation may affect the tenancy, not only as the child may not be brought into the world alive, but as the mother may have died before the operation. The law is clear on this point: "If the woman in her travel dieth," says Coke Littleton, "and the child is ripped out of her body alive, yet shall the husband not be tenant by the courtesie; because the child was not born during the marriage, nor in the lifetime of the wife, but in the meantime the land descended; and in pleading he must allege that he had issue during the marriage."

But suppose the operation performed before the mother has expired, and that the child has lived, though it be but for an instant, tenancy is evidently created just the same as it would be were the child born otherwise. It is easy to see, however, in what way litigation might ensue, should the mother expire under the operation, or should it be attempted to extract the child while the state of the mother as to life or death was unequivocal. The main question would be one of fact,—whether the child were extracted alive, the mother surviving the operation were it but for an instant?

There is obviously a strong inducement in the present state of the law, to have the operation performed on the yet living mother, where it appears not improbable that she may perish before the birth can be effected in the usual manner. And perhaps I may take this opportunity of throwing together some remarks on this formidable operation, which, indeed, claims the attention of the medical jurist scarcely in any other way than as now contemplated. It may, no doubt, be wantonly and mischievously had recourse to, and the mother's life be compromised in consequence; in which case certainly a medico-legal question would arise as to the propriety of having attempted, and the amount of violence effected by, the operation *; but the consideration of questions of this sort belongs to a subsequent part of the course. Here we may briefly inquire as to the chances of the operation creating a tenancy by the courtesy.

"I think," says Coleridge, in his Table-Talk, "there are only two things wanting to justify a surgeon in attempting the Cæsarean operation: first, that he should possess infallible knowledge of his art; and secondly, that he should be infallibly certain that he is infallible." The doubt here so emphatically intimated, of the unjustifiable nature of the operation, seems not to have been peculiar to Coleridge alone; it appears to be the national feeling. While other nations have been freely practising the cæsarean operation, and boasting of their success in its performance, it has been comparatively seldom attempted among us, and then apparently with results not such as to justify more frequent trials.

It is curious that there is no mention of the cæsarean operation in the writings of the ancient medical authors; probably because it was only performed on the dead. There was a law, however, as early as the time of Numa, that no pregnant woman should be buried until the fruit of her womb was extracted. Traditions, too, were prevalent, of various eminent persons who were thus "untimely ript" from the uterus. Esculapius was cut out of his mother, Coronis, after she had been slain by Apollo; Scipio Africanus, the

* See Med. Gaz., vol. xi. p. 556.

conqueror of Hannibal, was born in this way; Julius Cæsar also, it is said, but erroneously; and the bold Macduff seems to have owed no small share of his success in combating his fierce antagonist, to the superstition attaching to his artificial birth.

Up to about the sixteenth century, it seems never to have been contemplated that the operation should be performed, save where the mother died undelivered. Rousset, a contemporary of Ambrose Paré's, first published a treatise, in which there was igven an account of some cases of the operation being successfully performed, the women recovering. It was a sow-gelder, of Alespachen (as Bauhin reports), who first set the example of it on the living woman —his own wife—and she afterwards bore several children.

Without entering into a detailed notice of subsequent authorities, I may come at once to comparatively recent times. Baudelocque has given an account of 73 operations, 31 of them successful; Sprengel mentions 106 cases, 61 of which were prosperous; and Simon, in the Memoirs of the Academy of Surgery of Paris, has noticed 64 successful cases, in 13 of which the operation was repeated; some of the patients having undergone it five or six, and one even seven times.

Notwithstanding this, the practitioners of Great Britain have not felt themselves much encouraged to practise the operation. They have rarely, if ever, resorted to it, except in cases of necessity, where, through pelvic distortion, or tumors, there was no chance of delivering the mother otherwise; nor have they thought themselves justified, like their continental neighbours, in substituting gasterotomy where craniotomy seemed adequate to effect the delivery. Hence, and not from any peculiarity in our climate or the constitution of our females, their little success. It appears, that out of about thirty instances in which the cæsarean section has been tried in this country, only one or two have terminated favourably, so far as the preservation of the mother has been concerned: and in the first and chief of these it has been doubted whether the operation was truly cæsarean—whether, in fact, *gastro-hysterotomy*, or section of both uterus and abdomen, was effected in it. The case to which I allude is related at length by the operator, Mr. Barlow, of Blackburn, in the Medical Records and Researches: a brief outline of it may not be uninteresting.

Jane Foster, a healthy woman, forty years of age, and who had had several children, fell from a loaded cart, the wheel of which passed over her pelvis as she lay on her back. One of the ossa ilii was fractured, and much injury done to the ossa pubis. There was an elevation of the head of the thigh-bone on the left side, which, with her other sufferings, rendered the patient lame.

She afterwards became pregnant, and was taken in labour 22d November, 1793. Three or four days passed without prospect of delivery; the waters were discharged, and no part of the child could be ascertained to present within reach. A consultation was held, when Mr. Barlow, on examining per vaginam, found, to his great surprise, that he could barely pass his finger between the pubis and last lumbar vertebra, while the outlet was so contracted as scarcely to admit the introduction of three fingers. On a more strict examination, he felt a very evident depression of the ossa pubis, "with a protuberance in a direction somewhat more towards the hollow of the sacrum than in an exact line with the last lumbar vertebra." Mr. Barlow was induced to consider this protuberance as a deposit of bony matter, produced after a separation of the symphysis pubis caused by the accident; but in whatever way it originated, it projected to within *half an inch* of the sacrum. After four days' suffering, the pains of labour ceased: matters now became almost desperate, and the cæsarean operation was proposed. The woman herself consented to it without hesitation, and it was accordingly performed on the morning of the 27th. On laying open the "uterus," which was observed to be "very thin, scarcely exceeding that of the peritoneum," the child presented with its breech, and was extracted dead. The placenta and membranes were then removed without difficulty; nor did any hæmorrhage follow. The wound of the abdomen was united with a few sutures, and was healed by the sixth day. The womb contracted well; the lochia were as abundant as in ordinary cases, and, in short, no material accident having occurred, the woman was able to leave her bed by the 10th of December, and to resume her usual occupations on the 17th. She enjoyed good health afterwards, and survived for several years. When she died, her pelvis came into the possession of Mr. Barlow, and this drawing, the original of which was copied from nature, represents its malformed structure.

You observe the tuberosities of the ischia (*a*, *a*,) greatly approximated, and an almost complete obliteration of the arch of the pubis. The symphysis pubis projects outwards very remarkably, and the conjugate diameter is in consequence extremely contracted. In the pelvis stripped of its soft parts, this diameter was not more than an inch and an eighth, and through

the greatest portion of its extent, the brim did not measure above seven-eighths of an inch.

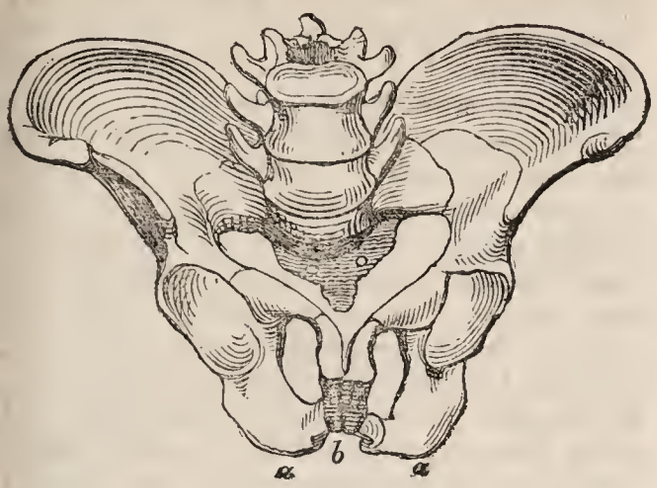


Fig. 23.

This case,—though suspected to be one in which the membranes merely were divided, and not the uterus—that organ being previously ruptured—may serve as a good example of the sort of contingency in which British practitioners conceive they may venture on the operation; they limit their employment of it to those cases only in which, from the extreme disproportion of the pelvic diameter to those of the child's head, there is no hope of extracting the infant by any other method.

But it deserves to be considered whether this reluctance, or scruple, on the part of our surgeons, may not be carried too far, in the face of that success which continental practitioners (Locher, Müller, and Gräfe, for example) have had, and whether gasterotomy might not safely be resorted to, with every prospect of preserving both infant and mother, in many cases where the usual method is to procure delivery by "lessening the head," or in other words, by deliberately destroying the child. Of the desirableness of divesting such an operation of its terrors, I need not say another word, as you must all be aware that, upon its timely performance, so much of the worldly happiness of the patient and her relatives depends.

We now proceed to consider the question of live or still birth, as it may be raised

2. *In Criminal Cases.*

If wilful injury be done to a live-born child, it is murder; but in proof of the crime it must be shown that the child was born alive.

To enter into an inquiry as to what is meant by being born alive, in reference to criminal charges, would lead us at once into the subject of infanticide. It will be more profitable, however, before we come immediately to that subject, to take a view of the injuries which are frequently offered to the fœtus, or embryo, before birth; for both topics may be considered as comprehended under one general head, with a common appellation—that of Prolicide, or the destruction of offspring; a term which I only wonder has not been more generally adopted.

Prolicide, then, embraces criminal abortion (or miscarriage, as the law terms it) and infanticide. I shall treat of each in order.

ABORTION, OR MISCARRIAGE.

The physiology as well as the morality of the ancients was so loose, that little or no compunction was experienced relative to the procuring of untimely births. The legislators, in certain of the old communities, enjoined it as a duty on their citizens to check the population by the practice of infanticide, whenever their families attained a specified number; and they frequently did not wait for nature to complete the course of gestation, but practised fœticide, or, as it appeared to them, the mere removal of a visceral obstruction, as a thing not only convenient, but praiseworthy. No wonder it was so. Hippocrates, or rather the author of a tract attributed to him, held that the fœtus was not endowed with life till thirty days after conception, if it were male, and not till forty-two, if female. Galen supposed that the fœtus was not animated till forty days after conception; others were of opinion that it required for a male forty days, and for a female eighty days, before it possessed a vital principle. The Stoics, strangest of all, maintained that the fœtus was destitute of life until the moment it respired; that is to say, that it was an unanimated though organic substance during the period of utero-gestation. It is easy to see to what consequences such doctrines must have led wherever they were entertained. But even among the moderns, and where the advancement of knowledge should have taught people better, opinions much akin to those just noticed have been adopted and acted upon. Zacchia, the eminent Roman medical jurist, laid down sixty days as an equitable period within which abortion might be practised without any breach of morality or religion. This was probably a necessary allowance for the lax state of morals that still prevailed in the ecclesiastical communities, notwithstanding the purifying effects of the Reformation.

Legal distinctions.—But what shall we say of the English law, which, even at the present day, does not recognize the fœtus in utero as endowed with life, till the time of quickening has been ascertained to have arrived? *Portio viscerum matris* is the designation by which it has been noticed in the older law books:

and some very material distinctions are made in our statute law, according to the period and circumstances of pregnancy.

In the earlier condition of our jurisprudence, abortion under any circumstances did not amount to murder; it constituted, however, in certain respects, a high misdemeanor. But Lord Ellenborough's Act (43 Geo. III., c. 59) introduced a change: if abortion was wilfully effected *before* quickening, it was accounted a felony, punishable with fine and imprisonment, or transportation for life: but abortion, *after* the period of quickening, when criminally procured, was punished as a capital crime with death.

The law which is now in force (9 Geo. IV., c. 31, s. 13) is almost identical, and is worded as follows:—"Be it enacted, That if any person with intent to procure the miscarriage of any woman *then being quick with child*, unlawfully and maliciously shall administer to her, or cause to be taken by her, *any poison or noxious thing*, or shall use *any instrument or other means whatever with the like intent*, every such offender, and every person counselling, aiding, or abetting, such offender, shall be guilty of felony, and being convicted thereof, shall suffer death as a felon. And if any person, with intent to procure the miscarriage of any woman *not being, or not being proved to be, then quick with child*, unlawfully and maliciously shall administer to her, or cause to be taken by her, *any medicine or other thing*, or shall use *any instrument or other means* whatever with the like intent, every such offender, and every person counselling, aiding, or abetting, such offender, shall be guilty of felony, and being convicted thereof, shall be liable, at the discretion of the court, to be transported beyond the seas for any term not exceeding fourteen years nor less than seven years, or to be imprisoned, with or without hard labour, in the common gaol or house of correction, for any term not exceeding three years; and if a male, to be once, twice, or thrice publicly or privately whipt (if the court shall so think fit) in addition to such punishment."

The absurd distinction here preserved in accordance with the old ideas about quickening, is disgraceful to our legislators; but I have it from good authority, that this is to be one of the very first points amended in the criminal code now in preparation: one punishment, and that not capital, is to be awarded for the crime, at whatever period of pregnancy it may be committed.

A case which may serve to illustrate the law in its actual state, occurred not very long since on the Norfolk Spring Circuit, before Mr. Baron Vaughan. John Coe was indicted for feloniously administering savine to Henrietta Freeman, for the purpose of procuring miscarriage. Prosecutrix, who was but sixteen years of age, stated that the prisoner was the father of the child. When she told him she was pregnant, he said he would give her "some stuff to make her unwell, as she ought to be." She consented to take it, provided it did not hurt herself. The drug, according to prisoner's direction, was put into boiling water, and drunk off. In a short time she was unwell, and a miscarriage took place. It was proved that the prisoner had purchased a quantity of savine, and some of it was found in his box. A surgeon proved that miscarriage had taken place, and stated that no drug whatever could be administered for the purpose of procuring a miscarriage without endangering the life of the person by whom it was taken,—a fact which, he thought, ought to be generally known.

The prisoner was found *guilty*, and sentenced to seven years' transportation. He obviously owed his escape from capital punishment to its not being proved that the child was quick.

Objects of inquiry.—Whenever a question concerning a criminal abortion is raised, there are in general three points on which justice will require to be satisfied. 1. Whether there has really been an abortion; in other words, whether a *corpus delicti* can be made out. 2. Whether it has taken place naturally or by criminal interference. And 3. Whether it may not have been justifiable, owing to some peculiar circumstances in the physical condition of the female. On each of these heads I shall make a few remarks.

1. *The fact of abortion.*—The main proof that abortion has occurred, is the presence of the fœtus or the ovum. Without this the investigation is defective, and halts at the very outset.

The embryo may happen to be expelled at a very early period, when the ovum, coming away entire, presents a shaggy appearance on immersing it in water. At a later period the membranes may burst, and the fœtus alone be found in the discharges. Sometimes the entire ovum is enveloped in a clot of blood, and may easily escape detection, unless much care be taken in searching for it. It may even be necessary to steep the suspected clot for a day or two in water. In general we should examine an early ovum with the greatest caution. By gentle agitation and the use of the syringe, the coagulated blood may be removed; after which, by delicate dissection under water, and using fine, but not sharp, instruments, its real nature may be made out.

A careful search of this kind, not only to ascertain whether there be an embryo

present, but whether it be normal or the contrary—blighted, is absolutely necessary in such cases as come under the cognizance of the medical jurist. Here, for example, is an ovum which, by being prepared in this way, tells its own story.

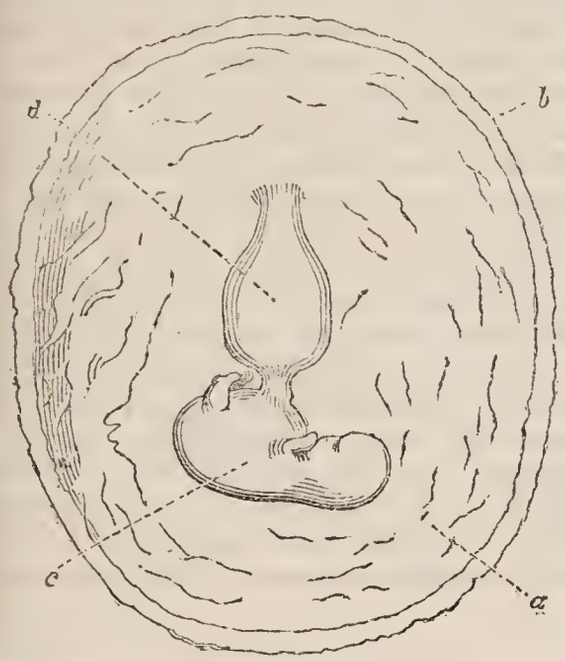


Fig. 24.

You perceive, from the relative disproportion of the embryo (*c*) and its envelopes (*b*, *a*), that the general structure is abnormal. It is, in fact, an ovum which was expelled about the eighth or tenth week of pregnancy; and the embryo (*c*) perished about the fifth or sixth week, probably from the deposition of too much gelatine (*d*) in the funis, the vessels of which were thus compressed. Appearances of this description should go far towards annulling a charge of criminal abortion, for they imply strongly that the event occurred in the ordinary course of nature.

The rules already laid down in a former lecture* will suffice to enable you to form an opinion of the age of the fœtus, and to state in every case, if not at what time during the pregnancy the miscarriage occurred, at least at what period the fœtus perished. I shall therefore not detain you longer on these points.

The next step is to trace the ovum or fœtus to the source from which it came. Some female is suspected. We must examine her,—when, according to the period that shall have elapsed from the occurrence of the abortion, the appearances will be varied. If there be symptoms of recent hæmorrhage,—if a lochial discharge be present,—if the vagina, os uteri, labia externa, and the mammæ, be in those conditions which I described in a former lecture on the signs of recent delivery,—the proofs are strong. It may happen that the supposed mother has died, in which case the examination of her body may throw additional light on the circumstances of the case: the uterus will probably be found enlarged, and thickened, and vascular, and a placental mark may be found, and perhaps a corpus luteum; but above all, in the examination of the mother, we must be able to satisfy ourselves that the period indicated to have past since abortion correspond with that which has appeared to have elapsed since the fœtus was expelled; and the fœtus must accordingly be scrutinized with reference to these points, as well as to any marks of violence discoverable upon it.

2. *Mode in which effected.*—When we have thus been satisfied that the charge of abortion is not groundless, our next inquiry, and one that must be entered upon without loss of time, is—to what the occurrence of abortion has been owing? We must recollect that such an event may have been wholly accidental and involuntary, and yet that nothing may have been more natural than its concealment in certain moral circumstances. With this saving clause, however, it will probably be in most cases our painful duty to detect much vicious and wicked manœuvring on the part of females to bring on the expulsion of an ovum. I happen to be acquainted with one instance of a lady who, at a certain period of her pregnancy—about the tenth or twelfth week—regularly took a short sea voyage, which never failed to enable her to abort. And it is a very common practice for women to have recourse to drastic cathartic medicines, to large bleedings, to cantharides, savine, and other drugs, for the accomplishment of their depraved and dangerous purpose. Nay, we shall sometimes detect the marks of blows on the abdomen and loins, and the appearance of mechanical injury inflicted on the fœtus itself. To what extent, however, personal violence may be employed without procuring abortion, is well exemplified by a case that occurred not long since in Dr. Wagner's practice at Berlin. "Among the remarkable cases which came before us," says the Professor, in his half-yearly report, "was one of *attempted abortion*. A young woman, seven months with child, had employed savine and other drugs, with a view to produce miscarriage. As these had not the desired effect, a strong leather strap (the thong of a skate) was tightly bound round her body. This, too, availing nothing, her paramour (according to his own confession) knelt upon her, and compressed the abdomen with all his strength: yet neither did this effect the desired object. The man now trampled on the girl's person while she lay on her

* Lecture III. p. 67, *ante*.

back; and as this also failed, he took a sharp-pointed pair of scissors and proceeded to perforate the uterus through the vagina. Much pain and hæmorrhage ensued, but did not last long. The woman's health did not suffer in the least, and pretty much about the regular time a living child was brought into the world, without any marks of external injury upon it."

Not rarely does it happen that the females who are so abandoned as to practise these methods of procuring miscarriage, pay the forfeit of their lives for their wickedness. All the means which I just now enumerated are attended with extreme danger to the mother, whom they often destroy, not only without concealing the nature of her guilt or letting it die with her, but perhaps causing a dreadful *exposé* of her guilty object first, and then producing an agonizing death, with all the tortures of remorse. Fodéré cites a remarkable case:—A woman, finding herself pregnant, and no longer able to conceal it, procured half an ounce of powdered cantharides, which she mixed with an ounce of sulphate of magnesia. She took this horrible dose in order to procure abortion. In a short time after she was seized with violent colic, and brought forth a *living* child in the most excruciating pains. During the succeeding night she died.

3. *Question of necessity.*—I have only a few words to say on the third question—namely, whether it be ever justifiable to cause miscarriage, or, in other words, whether a midwife or an accoucheur may bring on artificial labour? According to the strict interpretation of the law, they may not, even in cases of hæmorrhage or convulsions: but no doubt, if such an occurrence were pleaded on an indictment for alleged procural of abortion, the intentions of the accused and the circumstances of the case would have due weight with the jury; and the probability is that no grand jury would find true bills.

But this is supposing a case of manifest danger to the mother. What if the pregnant woman be not in immediate danger, but from the configuration of her pelvis, or some constitutional peculiarity, it be thought advisable by her medical attendant to bring on premature labour? Is it justifiable in such a case? Opinions are divided upon it; and the French authorities have argued the point at much length. Foderé strongly advocates such a discretionary power in the accoucheur: while Capuron as strongly opposes it; and his reasons are these—1. That it is always impossible to be certain that there is such a disproportion between the diameters of the pelvis and the bulk of the child as to warrant artificial delivery; and we know not what extraordinary efforts nature may make for the unaided relief of the mother. 2. That these premature labours *frequently* kill the child, and may the mother. And 3. That a supposed danger is not to be combatted with a real one. He concludes by deliberately stating, that it is better by far to have recourse to the cæsarean section, which, he says, saves *one in three*,—or even to symphysiotomy,—than to an artificial or forced delivery.

It seems to me that Capuron carries his notions on this point to a very unreasonable extent; and I believe I am borne out in saying so, by referring to what seems to be the practice of some of the best authorities amongst us on these matters. Dr. Hamilton, of Edinburgh, for example, is in the habit of bringing on premature labour in cases where he has reason to suppose that the child will not live, or may be born still, if the mother be allowed to go to the full term of gestation *. And others might be quoted to the same effect.

LECTURES

ON

MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LVI.

We shall now examine—

UMBELLIFERÆ, or APIACEÆ,

one of the largest, and, in reference to structure, one of the most natural families of the vegetable kingdom: moreover, it is a most interesting one for the physician, inasmuch as it contains a variety of dietetical, medicinal, and poisonous substances, in common use.

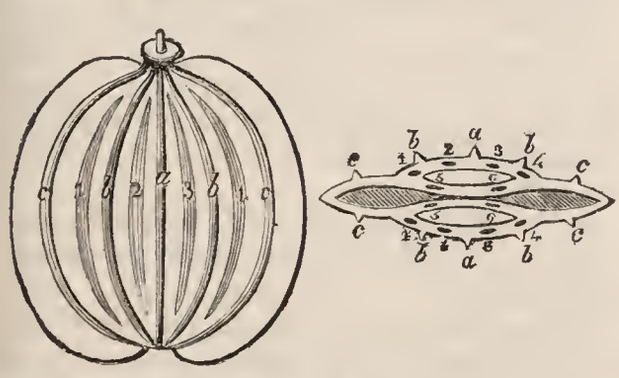
The roots are annual or perennial; the stems herbaceous and fistular; the leaves usually divided (though sometimes simple), and sheathing at their base; the flowers small, and arranged in umbels, from which circumstance the name of the family has been derived. At the base of the general umbels there is usually an involucre (*involucrum*); and in the same position in the partial umbels an *involucellum*. The calyx is superior, commonly five-toothed; the corolla is composed of

* Medical Gazette, vol. v. p. 344.

five petals, usually inflexed at the point. There are five stamina, and usually two carpels; so that umbelliferous plants belong to class *Pentandria*, order *Digynia*, of the Linnean arrangement.

The fruit, called by botanists *cremocarpium*, or *diakenium*, is usually termed by the Linneanists, though very improperly, *seeds*. Thus, in medicine we find the fruit of coriander, dill, caraway, cumin, anise, carrot, fennel, hemlock, &c. generally termed *seeds;* but in the new edition of the London Pharmacopœia this has been corrected. The fruit consists of two parts (termed *achenia*, *carpella*, or *mericarps*), adherent to a common axis by their face (the *commissure*.) Each carpel is traversed by *ridges*, of which five are primary (*costæ* seu *juga primaria*), and four are intermediate or secondary (*juga secundaria*): the spaces between the ridges are called *channels* or *interstices* (*vallеculæ*.)

In the substance of the pericarp there are usually linear receptacles of a brown colour, filled with volatile oil; they are called *vittæ*, or, by Decandolle, *reservoirs en cæcum;* they are considered to be dilatations of the intercellular spaces. Commencing from above, they extend downwards in different species, one-third, half, or three-fourths, the length of the fruit. They are often visible both on the commissure and in the channels. By a transverse section of the fruit, they appear as dark points. The fruit of the parsnip (*Pastinaca sativa*, fig. 151) is well adapted for observing the vittæ, especially if it be previously immersed in warm water.



A. B.

FIG. 151.—*Fruit of Pastinaca sativa.*

A, Dorsal surface.
B, Horizontal section of the fruit.
a, *b b*, *c c*, juga primaria; 1, 2, 3, 4, 5, 6, vittæ.

Vittæ are not invariably present; the fruit of conium, and of some other genera, being without them: the carpella of such plants are said to be *evittata*. Of course they are without aroma.

Fruit with only four dorsal vittæ is said to be *pauci vittatum*, as in Pastinaca; when more than this number, *multi vittatum*.

The aromatic properties of the fruit of Umbelliferæ (as of coriander, anise, dill, caraway, fennel, carrot, &c.) depend on a volatile oil secreted into, and contained in these vittæ.

The seeds of Umbelliferæ are albuminous: the albumen may be flat (*Umbelliferæ orthospermæ*), or it may be rolled inwards at the edges (*U. campylospermæ*), or it may be curved inwards from the base to the apex (*U. cælospermæ*.) The embryo is minute.

Anethum graveolens, or Dill (*Pastinaca Anethum* of Sprengel).

This plant was employed by Hippocrates under the name of ανηθον; it is mentioned by Dioscorides and Pliny. It is said by Campbell to be alluded to in the New Testament, though our translators have, by mistake, rendered the original word anise. It was introduced into this country in 1570.

Dill is a native of the south of Europe, as of Spain and Italy. It greatly resembles our common fennel, though its odour is less agreeable. The mature carpella (the *semina* or *fructus anethi* of the shops) are oval, flat, dorsally compressed, about a line and a half long, and from a half to one line broad; they are of a brown colour, and are surrounded by a lighter-coloured membranous margin (*ala*.) Each carpellum has five primary ridges, but no secondary ones. In each channel is one vitta, and on the commissure are two vittæ. These vittæ contain the aromatic oil. The odour of the fruit is strongly aromatic; the taste warm and pungent.

By distillation a pale yellow volatile oil (the *oleum anethi*) is obtained, the quantity of which varies with the maturity of the fruit. This oil has a specific gravity of 0·881, a penetrating odour analogous to that of the fruit, and a hot sweetish taste. It is readily soluble in alcohol and æther, and dissolves, according to Tietzmann, in 1440 parts of water.

The effects of dill are carminative and stimulant. Taken with the food it may be regarded as condimentary; that is, it assists the digestive process. For this purpose it is used by the Cossacks, and some other inhabitants of the Russian empire. It excites a sensation of warmth in the stomach, expels wind, and relieves some painful affections of the alimentary canal, of a spasmodic nature: hence it is used by nurses in the colic of children. It has also been employed to relieve hiccough. It has been supposed to promote the secretion of milk. It is usually given in the form of dill water (*aqua anethi*.) For adults the *oleum anethi* may be employed in the dose of a few drops on a lump of sugar, or dissolved in spirit.

Loudon says the leaves of dill "are used to heighten the relish of some vege-

table pickles, particularly cucumbers; and also occasionally in soups and sauces."

Pimpinella Anisum, or Anise (Sison Anisum of Sprengel).

This plant was used by Hippocrates, who calls it *αννησον*; it is also mentioned by Pliny and Dioscorides. It was introduced into this country in 1551. In our translation of the New Testament the word *anise* occurs; it should have been *dill*.

Anise is a native of Egypt and the Levant. It is largely cultivated for its fruit in Malta, Spain, and at various places in Germany, as at Erfurt and Mühlhausen, in Thuringia, at Magdeburg, &c. This fruit is imported into this country from Alicant and Germany.

The fruit (called in the shops *semina* or *fructus anisi*) is slightly compressed at the sides. The separated carpella are ovate, of a greyish green colour, with five paler, thin, filiform, primary ridges (there are no secondary ones), and covered with downy hairs. In each channel are three vittæ. The odour is aromatic, and similar to that of the fruit of *Illicium anisatum*, or *star anise*, a plant belonging to the family Winteraceæ. The taste is sweetish and aromatic.

A very elaborate analysis of the fruit has been made by Brandes and Reimann, in 1826. The following are their results:

Ætherial oil	3·00
Stearin combined with chlorophylle	0·12
Resin	0·17
Fatty oil, soluble in alcohol	3·37
Semi-resin	0·40
Phyteumacolla	7·85
Incrystallizable sugar	0·65
Gum	6·50
Extractive	0·50
Substance analogous to ulmin (*Anis-ulmin*)	8·60
Gummoin	2·90
Lignin	32·85
Salts (acetate, malate, phosphate, and sulphate, of lime and potash)	8·17
Inorganic salts, with silicic acid and oxide of iron	3·55
Water	23·00
	101 63

Oleum Anisi.—The oil of anise of the shops is imported into this country from Germany and the East Indies. It is procured by distillation from the fruit, in whose pericarp it resides. When carefully prepared it is transparent and nearly colourless, having a slightly yellow tinge. It has the odour and taste of the fruit from which it is obtained. Its specific gravity increases with its age: thus Martius says when the oil is fresh distilled, the specific gravity is only 0·979; but after keeping it for a year and a half, the specific gravity increased to 0·9853. It congeals at 50° F.; and does not liquify again under 62°. It is soluble in all proportions in alcohol; but spirit whose specific gravity is 0·84, dissolves only 0·42 of its weight. By exposure to the air it forms resin, and becomes less disposed to concrete. It is composed of two volatile oils, —one solid at ordinary temperatures (*stearoptene*); the other liquid (*eleoptene*), in the following proportions:—

Eleoptene	75
Stearoptene	25
	100

The *oleum badiani*, or the *oil of star anise* (*Illicium anisatum*), has the odour and taste of the oil of anise; but it preserves its fluidity at 35·6 F. It is said to be sometimes substituted for the *oleum anisi*.

Spermaceti, which is sometimes added to oil of anise, to promote its solidification, may be distinguished by its insolubility in cold alcohol. Camphor, which is said to be added for the same purpose, may be recognised by its odour.

Effects.—The effects of anise are similar to those of dill, before mentioned; that is, they are condimentary, stimulant, and carminative. The odour of the oil is said to be recognized in the milk: moreover, the urine, we are told, acquires an unpleasant smell when anise has been taken: hence it would appear that the oil of anise becomes absorbed. It has been supposed to promote the secretion of milk, urine, bronchial mucus, and of the menses, though without sufficient evidence. Vogel says that he accidentally discovered pigeons are readily killed by a few drops of the oleum anisi.

Uses.—Anise is used to flavour liqueurs, sweetmeats, confectionery of various kinds, ragouts, &c.

In medicine it is employed to relieve flatulence and colicky pains, especially of children. Nurses sometimes take it to promote the secretion of milk. It has also been employed in pulmonary affections.

The *aqua anisi* is the preparation of anise commonly employed. In the Pharmacopœia there is a formula for a *spiritus anisi*, the dose of which is one or two drachms. A spirit of anise, sweetened with sugar, is sold by the liqueur dealers: a somewhat similar compound is prepared in France, under the name of *creme d'anise*. In the Dublin Pharmacopœia there is a *compound spirit of anise*, containing angelica: it is nearly the composition of the Irish *usquebaugh*, which is coloured yellow by saffron, or green by sap-green.

Carum Carui, or *the Caraway.*

Caraway (fig. 152, *b*) is not mentioned in the writings attributed to Hippocrates. Pliny and Dioscorides, however, speak of it: the former calls it Careum, from Caria, its native country, the latter *κάρος*.

FIG. 152.—(*a.*) *Coriandrum sativum.* (*b.*) *Carum Carui.*

It is a native of this country, and is largely cultivated in Essex, for medicinal and other purposes—as for distillation with spirituous liquors, and for confectionary. The ripe carpella (the *semina*, or *fructus carui*, of the shops) are partly supplied from Germany, the remainder being the produce of this country. They are from $1\frac{1}{2}$ to 2 lines long, usually separated, slightly curved inwards, of a brownish colour, with five lighter coloured primary ridges; there are no secondary ones. In each channel is one vitta, and on the commissure are two. The smell is aromatic and peculiar, the taste warm and spicy.

By distillation, a volatile oil (*oleum carui*) is obtained, of a pale yellow colour.

The action of caraway is analogous to that of dill and anise, already mentioned, and it is employed in similar cases—namely, in flatulent colic of children. It is used in domestic economy, confectionary, &c. on account of its flavour; but it is also useful as a condiment.

The officinal preparations of this substance are the *aqua*, the *oleum*, and the *spiritus carui*. The spirit, sweetened with sugar, is taken in Germany as a dram. Caraway in substance, or in the form of oil, enters as an adjuvant, or corrective, into various officinal preparations; as the confection of opium, of rue, and of scammony; the compound tincture of cardamom and of senna; the compound pills of aloes and of rhubarb; and the compound spirit of juniper.

Coriandrum sativum, or Coriander (fig. 152, *a.*)

This is the *κοριαννον* of Hippocrates. It is mentioned also by Pliny and Dioscorides. It is a native of the south of Europe, and is cultivated in Essex. The ripe fruit (*semina*, or *fructus coriandri*), as met with in the shops, is globular, about the size of white pepper, of a greyish-yellow colour, and is finely ribbed. It consists of two hemispherical carpella, adherent by their concave surfaces. Each carpellum has five primary ridges, which are depressed and wavy; and four secondary ridges, more prominent and carinate. The channels are without vittæ, but the commissure has two. The odour of coriander is peculiar and aromatic.

By distillation, a volatile oil is obtained; on this the odour, taste, and medicinal properties of the fruit depend. It resides in the vittæ of the pericarp.

The effects and uses of coriander are similar to those of the preceding fruits. Cullen considered it as more powerfully correcting the odour and taste of senna than any other aromatic; and hence at one time it was a constituent of the compound infusion of senna, though now ginger is substituted for it.

There are no distinct preparations of coriander; but it enters into one officinal compound—namely, confection of senna.

Besides its medical uses, coriander is employed by confectioners and distillers.

Cuminum Cyminum, or Cumin.

This plant is mentioned in both the Old and New Testament, and by Hippocrates, who calls it *κυμινον αιθιπικον*. It is also noticed by Pliny and Dioscorides.

It is a native of Ægypt, where, as well as at Sicily and Malta, it is cultivated, and from which place all the cumin of commerce is brought. The ripe carpella (*semina*, or *fructus cumini*) are larger than anise, and of a light brown colour. Each carpellum has five primary ridges, which are filiform, and furnished with very fine prickles. The four secondary ridges are prominent and prickly. Under each of these is one vitta.

Like the preceding umbelliferous fruit, cumin yields a volatile oil (*oleum cumini*) by distillation.

Its medicinal properties and uses are similar to the substances of this family already described. As there is now no preparation of cumin in the new Pharmacopœia (the emplastrum cumini of the preceding editions being omitted), I am surprised that the College has still retained this substance in the list of the materia medica. It is principally employed in veterinary surgery.

Daucus Carota; the Carrot.

The carrot plant is too well known to require much description. Hippocrates speaks of the δαυκος, which some consider to be the Athamanta cretensis, whose fruit is termed *semina dauci cretici.*

The carrot is a native of this country. For medicinal uses we employ the well-known root and the fruit.

(*a.*) *Radix dauci.*—Carrot-root consists principally of lignin, sugar, starch, a volatile and fixed oil, a colouring matter, and a super-malate of lime. Wackenroder obtained half a drachm of colourless ætherial oil out of thirty-four pounds of the fresh root: it had a peculiar penetrating odour, and an unpleasant taste. The expressed juice, evaporated to dryness, is composed, according to the same authority, of

Uncrystallizable sugar, with some starch and malic acid	93·71
Albumen	4·35
Fixed oil, mixed with some ætherial oil	1·00
Red crystallizable resinous substance (*carotin*)	0·34
Ashes composed of alumina, lime, and iron	0·60
	100·00

By the action of alkalies on the ligneous tissue of the carrot, Braconnot procured *pectic acid.*

The dietetical uses of this root are well known. In medicine we sometimes employ it in the preparation of a poultice, the *cataplasma dauci* of the Dublin Pharmacopœia. It is prepared by boiling the root in water until it become soft enough to form a cataplasm. In this state it is used to correct the fœtid discharge, allay the pain, and change the action of ill-conditioned, phagedenic, sloughing, and cancerous ulcers. If prepared by merely scraping the root, it is much more stimulant, and is sometimes applied to chapped nipples.

(*b.*) *Fructus dauci: semina dauci*, of the shops. The fruit is from one line to a line and a half long, brown, oval, convex on one side, flat on the other. The five primary ridges are filiform and bristly: three of them occupy the convex back, the remaining two are on the plane of the commissure of the carpellum. The four secondary ridges are much larger and more prominent than the primary ridges; they are furnished with prickles. Under each of the secondary ridges is a vitta, and on the plane of the commissure are two, making in all six. The odour is peculiar and aromatic, the taste bitter and warm. By distillation, a volatile oil is procured.

Carrot fruit exerts a similar influence over the system to the before-mentioned umbelliferous fruits; but it is supposed to act more particularly on the urinary organs, and is in consequence recommended in some nephritic complaints.

Fœniculum vulgare: common fennel.

It grows wild in the south of Europe. The fruit (*semina fœniculi vulgaris* of the shops) is scarcely two lines long, oval, and of a dark or blackish aspect. Each carpellum has five obtusely-keeled pale yellowish grey primary ridges. In each channel is one vitta, (on which the brown colour of the channel depends), and on the plane of the commissure are two. The oil, obtained from the fruit by distillation, is called in the shops the *oil of wild fennel.* The fruit of this species is not used in medicine.

Fig. 153.—*Fœniculum vulgare.*

Fœniculum dulce.

Sweet fennel is by some regarded as a variety of the preceding species: but Decandolle considers it a distinct species. Its fruit is much longer, some of the specimens being nearly five lines in length, less compressed, somewhat curved, and paler, than the kind before-mentioned, with a greenish tinge. The oil obtained from it is called the *oil of sweet fennel.*

The effects and uses of sweet fennel are similar to those of the before-mentioned umbelliferæ. The only officinal preparation is the *aqua fœniculi;* but the fruit enters into the composition of some of the præparata—as the confection of black pepper and spiritus juniperi compositus.

Ferula Asafœtida.

History.—It is uncertain at what period asafœtida was either first known or described. The difficulty in determining its history arises from the uncertainty as to the ancient synonymes of this substance. Hippocrates, Theophrastus, and Dioscorides, speak of a plant which they term σιλφιον, and which is supposed by some to be the plant yielding the asafœtida. In the scholia of Aristophanes the discovery of this plant is attributed to one Aristæus, about 617 years before Christ,—a date which, as Sprengel observes, agrees very well with the statement of Theophrastus and Pliny, who tell us laserpitium, or silphium, was known seven years before the foundation of Cyrene; that is, six hundred years before the birth of Christ.

From silphium was obtained, by scarifying the root or principal stem, a juice which was termed *laser*, and, when obtained from plants growing in Cyrene, the *succus Cyrenaicus.* In the time of Pliny, however, the Cyrenaic juice was no longer procurable. "For many years," says this writer, "this plant has not been found in Cyrenaica, because the publicans [or farmers] who rent the pastures, finding it more profitable, destroy it as food for cattle. One stalk only, found in our days, was sent to the emperor Nero. We may know when cattle meet with young shoots of it, by the sleeping of the sheep when they have eaten it, and the sneezing of the goats. For a long time past the only laser brought to us is that which is produced abundantly in Persia, Media, and Armenia, but it is far inferior to the Cyrenaic."

Several reasons have led to the belief that the *laser* of the ancients is identical with our asafœtida. Geoffroy has summed up these so briefly, that I cannot do better than quote him. "Forasmuch as it is now almost universally agreed, that Persia is the native soil of laser and of asafœtida; that the use of this at present among the Indians, is the same with the use of laser among the ancients; that their esteem for it is the same; that asafœtida is at this time prepared in Persia entirely in the same manner as the juice of silphium was formerly; and lastly, that the juice of the Cyrenaic silphium only differs from the Persian in mildness of smell. We may certainly conclude that the silphum, laser, and succus Cyrenaicus of the ancients, and the asafœtida of our shops, are not juices of distinct kinds, but the same, differing very little from each other."

Lieut. Burnes, in his "*Travels in Bokhara,*" says—"that at the pass of 'Dundan Shikun,' or the 'Tooth-breaker,' " we found the asafœtida plant in exuberance, and which our fellow-travellers ate with great relish. The plant, I believe, is the silphium of Alexander's historians, for the sheep cropped it most greedily, and the people consider it nutritious."

My friend, Dr. Royle, thinks that from the locality and uses of Prangos pabularia, this plant corresponds more nearly with the silphium of some of the ancients.

Botanical history.—The plant yielding asafœtida was first accurately determined by Kæmpfer in 1687, and the description of it published in 1712. He terms it Ferula Asafœtida. Dr. Royle thinks it probable that more than one species of Ferula yields this gum resin in the different parts of Persia, Caubrel, and Bokhara.

Ferula Asafœtida is a native of Persia, growing in abundance on the mountains of Chorasan and Laar. Lieut. Burnes found it at an elevation of 7000 feet on the Hindoo Koosh. The root is perennial, large, black externally, white internally, and filled with a milky alliaceous juice: near the top it is beset with many strong rigid fibres. It continues many years in the earth, increasing in bulk. The stem is round, simple, and attains a height usually of 6 or 8 feet (8 or 10, according to Burnes). The radical leaves are pinnate, with sinuated pinnulæ: in regard to their shape, Kæmpfer compares them to the leaves of Pæonia officinalis, but in colour and other respects they resemble Ligusticum Levisticum, or Lovage. The umbel is many rayed, and without involucra.

Preparation.—Asafœtida is prepared by making transverse incisions into the upper part of the root; the footstalks of the leaves and the fibres at the root, having having been removed some weeks previously. The milky juice which exudes, is, after some days, scraped off, placed in cups, and hardened in the sun.

Physical properties. — I am acquainted with two varieties only of asafœtida, but Martius describes three.

(*a.*) *Asafœtida in the tear: asafœtida in granis seu in lachrymis.*—This kind occurs in distinct, roundish, flattened or oval tears, and also in irregular pieces, varying from the size of a pea to that of a walnut, of a yellow or brownish yellow colour externally, but white internally. This kind is rare.

(*b.*) *Asafœtida in the mass: lump asafœtida: asafœtida in massis.*—This variety is that usually met with in the shops. It occurs in variable sized masses, of irregular forms, and having a reddish or brownish yellow colour. Frequently these masses are observed to be made up of the beforementioned tears, agglutinated by a reddish brown substance: these form that kind of asafœtida sometimes denominated *amygdaloid* (*asafœtida amygdaloides*).

Martius describes a third kind of asafœtida, under the name of *asafœtida petræa*. He says it occurs in irregular more or less angular pieces, and externally resembles dolomite.

Both the above varieties agree in certain properties. Thus their taste is acrid and bitter, and their odour strong, alliaceous and peculiar; to most persons being remarkably disagreeable, whence the Germans have denominated asafœtida, *Teufelsdreck*, or *stercus Diaboli;* in plain English, *Devil's dung*. However, this dislike to the odour of asafœtida is not universal: some of the Asiatics being exceedingly fond of this drug, taking it with their food as a condiment, or using it to flavour their sauces, or even eating it alone. Hence among some of the older writers we find it denominated *Cibes deorum,—food of the Gods.* Captain M. Kinnier tells us that in Persia the leaves of the plant are eaten like common greens, as is the root when roasted: and Lieut. Burnes, in his Travels in Bokhara, speaking of asafœtida, says, "in the fresh state it has the same abominable smell; yet our fellow travellers greedily devoured it." But the fondness for this substance is not confined to the Asiatics: for I am assured by an experienced gastronome, that the finest relish which a beef steak can possess, may be communicated by rubbing the gridiron on which the steak is to be cooked, with asafœtida.

The fracture of asafœtida is conchoidal, white, or milk-white, with a waxy lustre. By exposure to light and air, the recently fractured surface acquires in a few hours a violet red, or peach-blossom red colour; but after some days or weeks, this colour diminishes in intensity, and gradually passes into a reddish or brownish yellow.

Asafœtida is fusible and inflammable; burning in the air with a white flame, and the evolution of much smoke.

Chemical composition.—The most important constituents of asafœtida are volatile oil, resin, and gum. The active principles are the oil and the resin. It has been analysed by Trommsdorf, Meissner, Pelletier, and Brandes: the most elaborate analysis is that made by the latter chemist. From the large quantity of saline matters which he found, he called asafœtida a *saline gum-resin*. Pelletier's analysis, which, on account of its conciseness, I shall quote, agrees for the most part with Brandes', but it is not so detailed, and the saline constituents are not so fully made out.

Resin	65·00
Gum	19·44
Bassorine	11·66
Volatile oil	3·60
Supermalate of lime, and loss	0·30
	100·00

1. *Volatile oil of asafœtida.*—This is obtained by distilling asafœtida with either water or alcohol. It is on this principle that the odour of this gum-resin depends. It is lighter than water, and is at first colourless, but by exposure to the air acquires a yellow tinge. It dissolves in all proportions in alcohol and æther, but requires more than 200 times its weight of water to dissolve it. Its taste is at first mild, then bitter and acrid; its odour is very strong. It evaporates very quickly, and soon fills a large room with its odour. Sulphur, and probably phosphorus, are among its elementary constituents. The presence of sulphur in asafœtida is shown in various ways: thus if chloride of barium be added to water distilled from asafœtida, and likewise a little chlorine, the sulphur becomes gradually acidified, and after some time a precipitate of sulphate of baryta is formed. Moreover, if pills made of asafœtida be rolled in silver leaf, the latter, after a few days, is blackened by the formation of a sulphuret of silver.

2. *Resin of asafœtida.* — According to Brandes, the resin of asafœtida is of two kinds: one insoluble, the other soluble in æther. The proportion of the first to the second is as 1·6 is to 47·25. When the tincture of asafœtida is added to water, a milky mixture is formed by the deposition of the resin. It is to this resin that asafœtida owes its property of reddening when exposed to air and light. Asafœtida resin is distinguished from other resins by the blue-coloured layer produced when acid solutions of it are neutralised by alkalies.

3. *Gum and bassorine.*—These constituents agree in being insoluble in alcohol. Bas-

sorine differs from gum, in being insoluble in water.

4. *Saline and other constituents.*—According to Brandes, asafœtida contains a considerable quantity of saline matter—namely, the malates, acetates, sulphates, and phosphates of potash and lime, and carbonate of lime. Oxyde of iron, alumina, phosphorus, and sand, (silicic acid) are also mentioned by him among the constituents of asafœtida.

Solubility of asafœtida.—From the preceding account of the constituents of asafœtida, it will be evident that neither water nor alcohol can perfectly dissolve this substance: the first will not act on resin, the second cannot dissolve the gum. Proof spirit is one of the best solvents. Alcohol will extract all the active matter of asafœtida.

Physiological effects.—Asafœtida is usually placed by pharmacological writers among those remedies which they denominate antispasmodics or stimulants. Its local effects are moderate: it is devoid of those acrid and irritating properties possessed by some resins and gum-resins, as gamboge, euphorbium, scammony, &c. In the mouth, as already mentioned, it causes a sensation of heat, and the same effect, accompanied by eructations, is experienced in the stomach, when asafœtida is swallowed. In Professor Jörg and his pupils (males and females), who endeavoured to elucidate the effects of this medicine, by experiments made on themselves, doses of asafœtida not exceeding a scruple, caused uneasiness and pain of the stomach, increased secretion of the gastro-intestinal membrane, and alvine evacuations. The pulse was increased in frequency, the animal heat augmented, the respiration quickened, and the excretions from the bronchial membrane and skin promoted. A very constant effect was headache and giddiness. The urino-genital apparatus appeared to be specifically affected, for we are told in the males there was an increase of the venereal feelings, with irritation about the glans penis; while in the females the catamenial discharge appeared before its usual period, and uterine pain was experienced.

These stimulant effects of asafœtida were observed in a greater or less degree in all the nine persons experimented on; and it should be borne in mind, that the dose did not, in any one case, exceed a scruple. It is impossible to reconcile these results and the observation of practitioners generally, with the statement of MM. Trousseau and Pidoux, who tell us that they have taken half an ounce of good asafœtida at one dose, with no other effect than that of altering the odour of their secretions, by which they were kept for two days in an infected atmosphere, possessing a more horrible degree of fœtidity than even asafœtida itself!

Modus operandi.—Asafœtida, or its odorous prineiple, becomes absorbed by the veins, though slowly. Flandrin gave half a pound of this gum-resin to a horse; the animal was fed as usual, and killed sixteen hours afterwards. The odour of asafœtida was distinguished in the veins of the stomach, of the small intestine, and the cæcum: it was not noticed in the arterial blood, nor in the lymph. Tiedemann and Gmelin were not successful in their search for it: they gave two drachms of asafœtida to a dog, and at the end of three hours, were unable to recognise the odour of it either in the chyle of the thoracic duct, or in the blood of the splenic and portal veins: but they detected it in the stomach and small intestines.

In farther proof of the opinion that asafœtida becomes absorbed, may be mentioned the detection of the odour of this substance in the secretions. The experience of MM. Trousseau and Pidoux already related, may be adduced as corroborative of this statement. We are told that the transpiration of Asiatics who use asafœtida daily, is extremely fœtid. Aristophanes, in his play of the "Knights," alludes to this circumstance. Vogt says that the secretions from carious ulcers sometimes smell of asafœtida, when this substance has been taken for some time.

Uses.—As before stated, asafœtida is employed by some nations on account of its flavour, and as a condiment. The Brahmins, we are told, use it against flatulence, and to correct the ill effects of their vegetable diet.

Medically, it is principally employed in certain diseases which have been usually termed nervous, or spasmodic; from which circumstance this remedy has been called an *antispasmodic.*

1.—*In hysteria and hypochondriasis.*—Few remedies have deservedly acquired such celebrity in hysteria as asafœtida. Dr. Cullen speaks in very high terms of it, and I believe the experience of most practitioners corroborates his opinion of its virtues. "I have found it," says he, "to be the most powerful in all hysteric cases; and when the presence of an hysteric paroxysm prevented medicines being taken by the mouth, I have found it, given in clyster, to be very effectual." The pathology of hysteria, and the *modus operandi* of asafœtida, are equally involved in obscurity. This remedy is also well adapted to hypochondriacal cases, especially when these are attended with flatulence.

2. *In flatulent colic* of hysterical or dys-

peptic subjects, or of infants, few remedies are more efficacious than asafœtida, when the disease is unaccompanied by any marks of inflammatory action. It is given with great advantage in the form of clyster.

3. *In affections of the respiratory organs.*—As asafœtida is presumed to be expectorant, it has been employed in *chronic catarrhs*, and is occasionally beneficial, especially in old persons. In *purely spasmodic asthma*—that is, in asthma unaccompanied with any appreciable organic lesion of either heart or lungs, MM. Trousseau and Pidoux speak in high terms of the effects of asafœtida. Cullen, however, says he has seldom seen it of much service; and my experience coincides with his. In *hooping-cough* it is sometimes beneficial, by diminishing both the violence and the frequency of the attacks. As a remedy for *croup* it hardly deserves notice, notwithstanding the commendations bestowed on it by some physicians.

4. *In uterine affections* asafœtida has been employed from a notion that it specifically affected the womb,—an opinion which is supported by the reports of Jörg's female pupils, that it brought on the catamenial discharge earlier than usual. Experience, however, has not been much in favour of the emmenagogue operation of asafœtida when this remedy has been employed in diseases. "Whether it be owing," says Dr. Cullen, "to the imperfect state in which we too frequently have this medicine, or to somewhat in the nature of the amenorrhœa, I would not positively determine; but this is certain, that I have very seldom succeeded in employing the asafœtida as an emmenagogue."

5. *Other uses.*—There are many cases in which the beneficial effects of asafœtida have been occasionally observed and asserted, such as in worms, rheumatic and gouty affections, carious ulcers, &c.

Administration.—Asafœtida is frequently given in substance, in the form of pills, in doses of from five grains to a scruple. The *compound pills of galbanum* contain, besides galbanum, asafœtida, myrrh, and sagapenum. They may be used in the same cases as asafœtida, and in the same doses. But in hysterical cases, as well as in flatulent colic, where we want an immediate effect, the asafœtida is best given in the liquid form. The *mixture of asafœtida* is one form of exhibiting it; this preparation is given in doses of from half an ounce to two ounces. The *tincture of asafœtida* which is made with rectified spirit, may be given in doses of from half a drachm to two drachms, mixed with water, which renders it milky, or some other diluent. The *fœtid spirit of ammonia* is prepared by distilling hydrochlorate of ammonia, carbonate of potash, rectified spirit, water, and asafœtida. Its dose is similar to the last preparation.

Galbanum officinale.

History.—Galbanum is mentioned by Hippocrates, Dioscorides, and Pliny: the two first of these writers call it χαλβάνη. Dioscorides says it is the product of a Ferula, growing in Syria; but the plant has not been discovered by any of the numerous travellers who have visited that country.

Botanical history.—Galbanum has for a long period been supposed to be the product of Bubon galbanum (fig. 154); but,

Fig. 154.—*Bŭbon Galbanum.*

as Mr. Don has justly remarked, this plant "possesses neither the smell nor the taste of galbanum, but in these particulars agrees better with fennel; and the fruit has no resemblance whatever to that found in the gum."

The fruit found by Mr. Don in galbanum constitutes a new genus, which he has called *Galbanum*, the species being *officinale*. It is allied to the genus *Siler*, but differs "essentially from it in the absence of dorsal resiniferous canals, and the commissure being furnished with only two." Of course a description of the plant is yet wanting.

Galbanum officinale may possibly grow in some remote and inaccessible part of Syria, as suggested by Mr. Don. Dr. Royle thinks it may perhaps be a native of the northern parts of Persia, or of Arabia.

Preparation.—Galbanum is said to be obtained "partly by its spontaneous exudation from the joints of the stem, but more generally, and in greater abundance, by making an incision in the stalk a few inches above the root, from which it immediately issues, and soon becomes suffi-

ciently concrete to be gathered."—*Woodville.*

Varieties and physical properties.—Two varieties of galbanum are described.

1. *Galbanum in the tear: Galbanum in lachrymis* seu *granis.*—This kind of galbanum, which is very rare, occurs in distinct, round, yellow, or brownish-yellow tears. None of the tears in my collection exceed in size that of a pea. The fracture is feebly resinous, and yellow.

2. *Lump galbanum: Galbanum in massis.*—This, which is the kind usually met with in commerce, occurs in large irregular masses, of a yellow or brownish colour, and composed of agglutinated tears, some of which have a whitish fracture, intermixed with seeds and pieces of the stem of some plant.

The odour of both kinds is the same—that is, balsamic, unpleasant, and peculiar, very different to that of asafœtida. The taste is hot, acrid, and bitter.

Chemical composition.—This gum-resin has been analysed by Fiddechou, by Meissner, and by Pelletier. The latter chemist gives the following as the constituents:—

Resin	66·86
Gum	19·28
Wood and impurities	7·52
Supermalate of lime	traces.
Volatile oil and loss	6·34
	100·00

The *volatile oil*, which is obtained by distilling the gum-resin with water, is described by Meissner as having a specific gravity of 0 912, and being readily soluble in spirit, æther, and fixed oils. The *resin* is described as having the singular property of yielding an indigo blue oil when heated to 248° F., or 266° F.

Physiological effects and uses.—Galbanum is less powerful than asafœtida, but its operation is of the same kind. The uses of the two gum-resins are the same; the modes of exhibition are also similar. The only preparations bearing the name of galbanum in the London Pharmacopœia are the *compound pills of galbanum*, and the *plaster of galbanum.* In the Dublin Pharmacopœia there is a *tincture of galbanum*, made with proof spirit.

Ferula ——— ? (*Sagapenum*).

History.—Hippocrates and Dioscorides speak of σαγαπηνον. Pliny calls it *Sacopenium.*

Botanical History.—The plant yielding it has been conjectured to be the Ferula persica, but without sufficient evidence: that it is one of the Umbelliferæ there can be but little doubt. It is, perhaps, a species of Ferula, as stated by Dioscorides.

Varieties and physical properties.—Two kinds of Sagapenum are occasionally met with: the finest consists of masses made up of agglutinated, brownish-yellow, semitransparent tears, and resembling galbanum, but having a darker colour and a more alliaceous odour. A commoner kind of sagapenum occurs in soft, tough masses, in which no distinct tears are distinguishable.

Chemical composition.—According to the analysis of Pelletier, this gum resin consists of

Resin	54·26
Gum	31·94
Malate of lime	0·40
Volatile oil and loss	11·80
Peculiar matter	0·60
Bassorine	1·00
	100·00

Brandes obtained 3·73 per cent. of a pale yellow volatile oil, which was lighter than water. The same authority tells us that one portion only of the resin is soluble in æther.

The *effects* and *uses* are similar to those of asafœtida. It is usually considered as holding a middle rank between asafœtida and galbanum. It enters into the composition of the confection of rue and the compound pills of galbanum.

Dorema Ammoniacum.

History.—Hippocrates and Dioscorides speak of ἀμμωνιακόν, which Pliny terms *Hammoniacum.* The latter author tells us that the plant yielding it is called *metopion*, and that it grows in that part of Africa which is subject to Æthiopia, near the temple of Jupiter Hammon (or Ammon), which, as well as the gum resin, received its name from ἄμμος, *sand*, on account of the sandy soil of the country.

Dioscorides says ammoniacum is obtained from a species of Ferula, which he calls ἀγασυλλῖς, growing in Cyrene. Mr. Don thinks that Dioscorides "was altogether mistaken as to its native country, and that the name Ammoniacum, or Armeniacum, as it is indifferently written, is really a corruption of Armeniacum." I cannot agree with Mr. Don in this opinion: that a substance bearing the name of ammoniacum is produced from a plant growing in that part of Africa alluded to by both Dioscorides and Pliny, is proved by Mr. Jackson, in his account of Morocco; who also says, that as this ammoniacum, by falling on the ground, becomes mixed with a red earth, it does not suit the London market.

Botanical history.—For some years ammoniacum was supposed to be produced

by the Heracleum gummiferum; a species first described by Willdenow, who obtained it by sowing the umbelliferous fruit found in the ammoniacum of commerce. Mr. Don, however, has ascertained that the plant yielding this gum resin belongs to an hitherto undescribed genus, to which he has given the name *Dorema* (from δορημα, *a gift*, or *benefit*); the species he has termed Ammoniacum.

Dorema Ammoniacum grows abundantly without cultivation, in Persia, in the province of Irak, over the arid plains in the vicinity of Jezud-Rhast. Mr. Don gives the following as its essential characters:—"Disk epigynous, cup-shaped; achenia compressed, edged, with three distinct, intermediate, filiform costæ. Univittate channels. Commissure quadrovittate."

Extraction.—The gum-resin is so abundant, according to Captain Hart, "that, upon the slightest puncture being made, it instantly oozes forth, even at the ends of the leaves. When the plant has attained perfection, innumerable beetles, armed with an anterior and posterior probe of half an inch in length, pierce it in all directions; it soon becomes dry, and is then picked off, and sent *viâ* Bushire to India and various parts of the world, and is an article of considerable export."

Varieties and physical properties.—Ammoniacum is brought from the East Indies and the Levant, in chests and cases. Two varieties of it are known in commerce:—

1. *Ammoniacum in the tear.*—This kind occurs in distinct dry tears, of an irregular form, externally yellow, internally white, opaque, with a vitreous fracture.

2. *Lump ammoniacum.*—This occurs in large masses composed of agglutinated tears, of a yellow colour externally, whitish internally. It is sometimes very impure, and of a plastic consistence.

Both kinds have a faint, unpleasant, peculiar odour,—a bitter, nauseous, acrid taste.

Chemical composition.—This gum resin has been analysed by Calmeyer, Braconnot, and Bucholz. Braconnot says its constituents are—

Resin	70·
Gum	18·4
Glutenifom matter, insoluble in water and alcohol	4·4
Water	6·
Loss	1·2
	100.0

The *physiological effects* of this gum resin are similar to, though less powerful than, those of asafœtida already mentioned. MM. Trousseau and Pidoux assert that in all the cases in which they have employed it, it had no stimulant effect either local or general. "We have taken," say these authors, "two drachms of this substance at once, without experiencing any of those accidents complaisantly indicated by authors." I would remark, however, that the local irritation produced by the plaster of ammoniacum is known to most practitioners,—a papular eruption being a frequent result of the application of this agent.

The *uses* of ammoniacum are the same as those of asafœtida. The former (ammoniacum) is principally employed as an expectorant in chronic catarrhs and asthmatic cases of old persons; and as a discutient.

We may give this gum resin in *substance*, in the form of pills, in doses of ten or fifteen grains; or it may be suspended in water, as in the *mixture of ammoniacum*, which is administered in doses of one or two fluid ounces. The *compound pills of squills*, used for their expectorant and diuretic effects, contain this substance as one of their constituents. The *plaster of ammoniacum* is applied to indolent tumors and chronic affections of the joints. The *plaster of ammoniacum with mercury* is employed in venereal cases; for example, to buboes, to promote their dispersion, and to venereal nodes.

Opoponax Chironium.

Theophrastus mentions four, Dioscorides three, kinds of πανάκες. The latter of these writers has given a good account of Opoponax, which he says is procured from πανάκες ἡράκλειον.

The Opoponax plant, *Opoponax chironium*, is a native of the south of Europe and of Asia Minor. According to Dioscorides, whose account is probably correct, this gum resin is obtained by incisions into the root: a milky juice exudes, which in drying acquires a yellow colour.

It occurs in irregular pieces or tears, of a reddish-yellow colour, with an acrid bitter taste and an unpleasant odour.

According to Pelletier, it consists of—

Resin	42 0
Gum	33·4
Starch	4·2
Extractive	1·6
Wax	0·3
Malic acid	2·8
Lignin	9·8
Volatile oil and loss, with traces of caoutchouc	5·9
	100·0

Its effects are analogous to the other fœtid gums, but it is very rarely, if ever, employed.

THIRD

REPORT OF MEDICAL CASES TREATED AT ST. GEORGE'S HOSPITAL;

WITH

"ROUGH LEAVES" FROM HIS CASE-BOOK.

BY R. MACLEOD, M.D.

ALTHOUGH I have not yet had the satisfaction of seeing reports of the results of their practice from any other of the medical officers of the metropolitan hospitals, and although I have nothing of especial interest to communicate on the present occasion, yet I am unwilling to discontinue the contribution of my mite towards the sum of statistical information which would speedily be amassed, were any general system of constructing and giving publicity to such documents, adopted.

Many of the cases in the subjoined tables have been highly instructive, and their progress has been regarded as such by numerous gentlemen attending the practice of the hospital; but as the detail of individual cases would be fatiguing to those who did not witness them, I have confined myself to stating the general results, and adducing a few examples, in which some important pathological or practical point is illustrated.

On the 1st of January, 1836, the patients in the hospital, under my care, amounted to	23
There have since been admitted	254
Total to be accounted for	277
Of the above cases there have been cured	168
Relieved	35
Complaints stationary	10
Transferred to surgeon	4
Dead	38
Remain under treatment	22
Total	277

The deaths have resulted from the following diseases, and at the following ages:—

Organic affections of the heart, with dropsy—8. Ages, 17, 20, 21, 30, 55, 56, 61, 65.
Without dropsy—1. Age, 56.
Phthisis—6. Ages, 18, 35, 48, 50, 60, 61.
Bronchitis—2. Ages, 60, 72.
Pleuritis—2. Ages, 19, 45.
Sloughy abscess of lung—1. Age, 30.
Granular liver, with dropsy—4. Ages, 32, 34, 60, 60.
Fatty enlargement of liver, without dropsy—1. Age, 49.
Acute cerebral disease, with serous effusion—3. Ages, 26, 35, 50.
Ditto, with sanguineous effusion—1. Age, 48.
Erysipelas—2. Ages, 43, 46.
Schirrus of pylorus—1. Age, 56.
Dysentery—1. Age, 55.
Disease of kidney, with dropsy—1. Age, 38.
Dropsy, apparently unconnected with organic disease—1. Age, 56.
Encephaloid tumor in pelvis, with dropsy—1. Age, 36.
Poisoning with arsenic—2. Ages, 23, 25.

The following table exhibits the ages of the 277 patients treated in 1836, and the number of deaths in each decimal period.

		Deaths.
Under 10	5	0
Between 10 and 20	42	3
20 .. 30	80	5
30 .. 40	67	8
40 .. 50	39	6
50 .. 60	29	8
60 .. 70	12	7
70 .. 80	2	1
80 .. 90	1	0
Total	277	38

The increase of mortality with the advance of years is rendered very striking by the above table. Of the five deaths between the ages of 20 and 30, two were from poisoning; and if we deduct these, so as to retain only cases of disease, we have 78 patients yielding but three deaths; whereas, between 60 and 70, of twelve patients, not fewer than seven died—the diseases being, organic affections of the heart, with dropsy, 2; organic affections of the liver, with dropsy, 2; phthisis pulmonalis, 2; bronchitis, 1.

CEREBRAL DISEASES—14.

Apoplexy, with hemiplegia, 3.—Cured, 2; Dead, 1.
Hemiplegia, without apoplexy on admission, 4.—Relieved, 1; Stationary, 2; Dead, 1.
Inflammatory affections of the encephalon, 4.—Cured, 3; Dead, 1.
Epilepsy, 2.—Cured, 2.
Mania e potu, 1.—Cured, 1.

Epilepsy from diseased Bone.

Of the above diseases of the brain, the only one which I think of sufficient interest to give in detail, was epilepsy, apparently resulting from the irritation produced by disease extending from the bones of the nose. For those who witnessed the intensity of the symptoms, as well as their peculiarity, in the violent and long-continued *rocking* motion of the patient, the case possessed great interest. So far as can be judged, the recovery was owing to the gradual influence produced by the sarsaparilla and iodide of potassium.

Feb. 18, 1836.—John Jones, æt. 29, had syphilis two years ago, for which he appears to have taken mercury irregularly; but gives a very imperfect account of himself. Three or four months ago a fœtid purulent discharge occurred from both nostrils, particularly the left, and has continued to take place to a greater or less extent ever since. Several portions of bone have passed, and the nose is flattened from the loss of part of the vomer. Has progressively lost flesh, and become nearly idiotic. Two months ago for the first time had a fit of epileptic character, which symptom has since frequently recurred. During the last two days has constantly sat up in bed, vibrating his body from side to side like a pendulum, which he says he does to keep off the fits. Has been purged, cupped, blistered, and had a seton in the back of his neck, without relief. Pulse 100, soft; skin cool; tongue white; bowels open.

℞ Decoct. Sarsæ. ℥ij.; Potassæ Hydriod. gr. iij. M. Sumatur ter die.

19th.—Had a fit of great violence last night, and another this morning. Complains of pain in the left temple, and the eye of that side is injected. Mouth slightly drawn to the left; rocking motion more violent than ever.

Cucurbit. Cruentæ temporibus, et abstrah. sanguis ad ℥xij.
Calomel gr. iij. h. s. Haust. Sennæ cras mane.
Repr. Decoctum Sarsæ ut antea.

20th. — Head relieved; rocking less violent.

22d.—More pain in temple and forehead; is rocking violently, and says he is going to have a fit.

Hirudines xij. tempori sinistro et fronti quamprimum. Rep. medicamenta.

23d, 24th, 25th, 26th.—Violent epileptic fits daily. Mouth more drawn to left side. Leeches repeatedly applied. A blister to left temple. Freely purged. Sarsaparilla and hydriodate of potass continued.

From this time the fits gradually became less frequent and less violent, and had ceased by the 5th of March. He continued, however, to have a purulent discharge from the nose, and attacks of pain in the forehead and temples, with giddiness; for which he had leeches repeatedly applied, and several blisters, always with relief. The sarsaparilla and hydriodate of potass were continued, under which his whole aspect changed remarkably: he gradually gained flesh and strength, and his intellect became much improved.

May 16th.—A considerable quantity of fœtid purulent matter, with blood, came from the right nostril, but no bone could be detected. From this time the discharge diminished, and he was dismissed June 12, having had no fit for three months, and having taken nothing but opening medicine during the last fortnight.

P.S.—I saw this patient in December, 1836. He had been employed since his discharge as a labourer; he had had a fit after working in the fields during the autumn, for which he had been cupped with relief, but still had occasional pain in the head.

SPINAL DISEASES—6.

Paraplegia, 3.—Cured, 1; Relieved, 1; Dead, 1.
Paralysis of fore arms, 3.—Relieved, 2; Stationary, 1.

VARIOUS NERVOUS DISEASES—30.

Hysteria, 17.—Cured, 10; Relieved, 5; Remaining, 2.
Chorea, 7.—Cured, 6; Remaining, 1.
Paralysis agitans, 1.—Much relieved, 1.
Neuralgia, 2.—Cured, 1; Relieved, 1.
Hypochondriasis, 3. — Relieved, 2; Stationary, 1.

DISEASES OF RESPIRATORY ORGANS—35.

Phthisis pulmonalis, 14. — Relieved, 8; dead, 6.
Bronchitis, 8. — Cured, 5; dead, 2; under treatment, 1.
Laryngitis, 1.—Cured, 1.
Pulmonitis, 4.—Cured, 3; dead, 1.
Pleuritis, 2.—Cured, 2.
Hæmoptysis, 3.—Cured, 3.
Sloughing abscess of lung, 1.—Dead, 1.
Empyema, 1.—Under treatment, 1.
Hooping cough, 1.—Cured, 1.

The case of empyema in the above list is one of great interest. The patient has had the operation of *paracentesis thoracis* performed, and many pints of matter have been removed: the aper-

ture is still open, and discharges freely. I shall publish the case when I can give the result, concerning which I am far from being sanguine.

One of the cases of phthisis was remarkable, owing to the existence of an external fistulous opening in the parietes of the chest. It is problematical how far this was dependent upon the action of the tartar emetic ointment, which appeared to have been very freely used.

Case of Phthisis, with fistulous opening in the parietes of the chest.

John Rivier, æt. 61; admitted May 11, 1836. About eighteen months ago was attacked with cough, which in the first instance was accompanied by expectoration of blood. He appears to have been under the care of several persons, and to have been subjected to a variety of treatment, but particularly in the form of counter-irritation, by means of tartarized antimony applied to the chest. States that six months ago, consequent on the applications made to his chest, two small swellings formed externally, near to each other, and two inches below the left nipple, which were punctured with a lancet, and some matter evacuated. One of these apertures never healed, and between four and five weeks ago he became sensible of air passing out through the opening when he coughed. At present there are five fistulous apertures, situated at the lower part of sternum, and left side of the chest anteriorly, from which matter oozes, and air may occasionally be seen to raise the pus in little bubbles, and heard to blow through the apertures as he coughs. The chest for some inches round the fistulous openings is dull, but respiration is heard in nearly the whole of right lung, and in the left, a little above the highest of the apertures. Has habitual cough, accompanied by purulent expectoration. Pulse 90, feeble. Considerable emaciation and nocturnal perspirations.

21st.—Gradually sank, and died on the evening of the 19th.

Autopsy.—The external openings on the chest were found to lead to a considerable irregular cavity, formed by the undermining of the integuments. On removing these, the ribs and cartilages were seen to be denuded and rough at various points. The ribs were sawn through on both sides, so as to elevate the whole of the anterior parietes of the chest: on doing this the anterior and lower portion of the left lung was found to be firmly adherent to the inside of the ribs. The lung was cut through, so as to leave the adherent portion *in situ*. A probe was now made to travel over the external surface where the integuments were undermined, when it found its way into the adherent lung. It was cut down upon, and found to have entered a bronchial tube through an ulcerated opening, which presented between the fifth and sixth ribs, near to left edge of the sternum.

The lungs on both sides contained numerous tubercles, many of which were clustered together, and formed into small vomicæ.—The preparation is in the museum of the hospital.

DISEASES OF THE HEART AND ITS APPENDAGES—24.

Acute pericarditis, 6.—Cured, 4; relieved, 1; dead, 1.

Various organic diseases of the heart, with dropsy, 16.—Cured (as regards the dropsy), 6; dead, 6; stationary, 1; under treatment, 3.

Organic diseases unaccompanied by dropsy, 2.—Relieved, 1; under treatment, 1.

Rheumatic Pericarditis—Maniacal Delirium.

While I believe that the assistance to be derived from the use of the stethoscope has been greatly exaggerated, and that even now some profess to discover by it many things which are clearly indicated by other means, yet there are unquestionably certain cases in which auscultation, mediate or immediate, gives a precision to diagnosis which it could not otherwise attain. The following appears to me to be an example of this, being one in which I believe the pericardium to have been the seat of the actual disease, although the cerebral disturbance appeared much more strongly marked to the observation of the bystanders. If this opinion be correct, the importance of the fact as regards the treatment is too obvious to require illustration, leading as it did to the steady and continued use of mercury, the only agent, so far as my experience goes, by which pericarditis under similar circumstances can be overcome. The fact of the symptoms in inflammation of the pericardium being chiefly, or even exclusively, referred to the head, is not new, a case of this kind having been recorded by M. Andral in his *Clinique Médicale*, and reference also made to it by M. Rostan; it was, however, still more explicitly mentioned by Dr. Latham, in one of his lectures published in the MEDICAL GAZETTE so early as January, 1829.

It is an important fact, then, in a practical point of view, that rheumatic pericarditis may take place without any such pain, or other uneasiness, being referred to the chest, as to lead the patient to complain of it; so that it may escape the attention of the practitioner unless he be aware of the danger, and on the alert to detect it. With some it may possibly be matter of question whether, in the case of Mary Hall, which I subjoin, the brain was not affected with inflammation, or other disease, implying more than mere sympathetic disturbance of function. My belief that it was not, depended upon my previous knowledge, that cerebral affections of the severest kind may be entirely dependent upon inflammation of the pericardium, and which was proved by the local signs to have taken place in the present instance; while there was no heat of scalp, injection of the eyes, or intolerance of light. Again, in Andral's case there were delirium, convulsive twitchings, tetanic spasms, coma, and paralysis of the upper extremities; yet all this was proved by dissection to have depended entirely on pericarditis, without a vestige of disease in the head.

Jan. 20th, 1836.—Mary Hall, ætat. 27, has suffered from rheumatic pains in various joints for about a month. A week ago the knees became more particularly affected, having been swollen and red. The day before yesterday the hands and wrists were seized, both being at present very painful, and somewhat swollen. Considerable fever of the common rheumatic character.

Fiat Venesectio et Mitt. Sanguis, ad ℥xii.; Calomel, gr. iii. hora somni. Haust. Sennæ, cras mane.

21st.—Pain relieved. Blood exhibits a large, firm, buffy, cupped coagulum.

Repr. Venesectio et Medicamenta.

22d.—Scarcely has any pain remaining; fever much reduced. Blood no longer buffed.

Pulv. Saponis cum Opio, gr. v. om. nocte. Haust. Sennæ cras mane.

25th.—Has continued free from pain, but her expression is rather anxious, and she was faint yesterday. To day, on being questioned, acknowledges that she has some uneasiness in the region of the heart, in which situation pressure between the ribs gives pain Slight dry cough. Nothing anormal in the sounds of the heart or respiration can be perceived. Pulse 108; skin hot; bowels sluggish.

Fiat Venesectio ad ℥xii.; Calomel, gr. iii. cum Opii, g. i. quamprimum et hora somni.
Haust. Sennæ cras mane.

26th.—Does not make any complaint, but she shrinks from pressure in the region of the heart. On applying the ear to-day, a rubbing sound can be distinctly perceived under and to the left of the sternum, particularly in a line with its centre. Pulse as yesterday; blood cupped and buffy; bowels open. More faintness and anxiety, with some incoherence.

Applicentur Hirudines, xvi. sterno. Calomel, gr. v.; Opii, gr. ½. M. fiat Pilula. Sumatur 4ta quaque hora, ad tres vices et deinde repetatur pro re nata.
Haust. Sennæ cras mane.

27th.—Denies having any uneasiness in the chest. Is at present lying on the right side. On making her turn on the back, so as to examine the heart as before, the pulsations are found to be more obscure, and convey the idea of being more distant. No rubbing sound.

Emplast. Lyttæ sterno. Repr. Pil. 6ta quaque hora, et Haust. Sennæ cras mane.

28th.—Again admits that she has some pain in left side of chest. Seems indifferent as to what posture she lies in. Is very restless, with constant delirium. Fully under the influence of the calomel. Pulse about 100; but neither this nor the heart's action can be accurately examined, on account of the extreme restlessness. Urine rather scanty. Passes her evacuations in bed.

℞ Tinct. Digitalis, ℥vi.; Tinct. Lyttæ, ℥xx.; Tinct. Scillæ, Spirit Ætheris Nitrici, a. 3ss.; Aquæ, 3x. M. fiat haustus, 6ta quaque hora sumendus.
Omittr. Pilulæ.

30th and 31st.—Constant delirium and unceasing jactitation, with frequent efforts to get out of bed, so that it has been requisite to put on a strait waistcoat. No affection of the pupil, or apparent dislike to light. Pulse about 100, feeble; urine more abundant, but continues, with the alvine evacuations, to be passed involuntarily. Mouth still sore, but mercurial action receding.

Repr. Haustus *sine* Tra. Digitalis.

Feb. 1st and 2d.—Scarcely any perceptible change in the general aspect of the case. During a few minutes' quiet the stethoscope was applied over the heart as she lay on her back. The pulsations were

found to be feeble, distant, and intermittent. Rather strong pulsation perceived in the carotids, and regurgitation in the jugular veins. Gums no longer show the mercurial action.

Habeat Calomel, gr. iii. hora somni. Repr. Alia.

3d, 4th, 5th.—Has had the calomel twice daily, and her mouth is again affected. She is to-day much calmer, and answers some questions. Says she has no pain either in head or chest, but in her ankles. On examining these they are found to be puffy, without redness or pitting. Heart's action as before; pulse rather firmer.

Omit. Pil. Repr. Haust. Diuret. et Haust. Sennæ, pro re nata.

8th.—Has gradually improved since last report, being quieter, though not collected. Yesterday asked for the bed-pan, but to-day has again passed her evacuations unconsciously. Pulse 100, more steady, but with occasional intermissions. Sounds of the heart approach the ear again, the idea of distance being diminished: they have a certain degree of sharpness, but nothing like *bruit*.

Strait waistcoat removed.

12th and 13th.—Had a fit, of epileptic character, yesterday, and another to day; both of considerable violence. No longer passes her evacuations without giving notice. Again complains of some pain in the chest, under the left mamma. Mouth well.

Calomel, gr. iii. quamprimum et hora somni. Haust. Sennæ altern. mane. Omittr. Alia.

15th and 16th.—No return of fit. Gums slightly affected. No pain in chest. General aspect much improved.

She continued in the hospital till the 11th of April, slowly improving. There was no recurrence of any rheumatic symptom, and the action of the heart remained quiet and natural. The only derangement of health at the period of her discharge was, that she was still rather weak, and her memory much impaired. Both these, however, were daily improving.

DISEASES OF THE FAUCES—2.

Cynanche tonsillaris, 2; cured, 2.

DISEASES OF THE ABDOMINAL VISCERA—51.

Indigestion, without evidence of organic disease, 7.—Cured, 5; relieved, 2.
Ditto, dependent on organic disease, 3.—Stationary, 2; dead, 1.
Hæmatemesis (vicarious), 3.—Cured, 3.
Ditto, from diseased liver, 1.—Dead, 1.
Vomiting and purging (English cholera), 2.—Cured, 2.
Dysentery, 6.—Cured, 3; relieved, 1; under treatment, 1; dead, 1.
Painter's colic, 2.—Cured, 2.
Enteritis, 1.—Cured, 1.
Icterus, 1.—Cured, 1.
Diseases of liver, with more or less of hepatic inflammation, 12.—Cured, 7; relieved, 2; under treatment, 3.
Chronic diseases of liver, with ascites, 13.—Cured, 2; under treatment, 3; stationary, 1; dead, 7.

Of the above cases, the only one on which I have to make any remark is one of dysentery. It was of many months' standing, and resisted all the ordinary remedies. I then had recourse to sulphate of copper, in the manner recommended by Dr. Elliotson. From that time the improvement was rapid, and the cure proved complete.

DISEASES OF THE KIDNEYS—6.

Nephralgia, 2.—Cured, 1; under treatment, 1.
Organic diseases, with dropsy, 4.—Cured, (as regards the dropsy), 2; under treatment, 1; dead, 1.

DISEASES OF THE UTERINE SYSTEM—11.

Hysteritis, 1.—Cured, 1.
Flooding after abortion, 1.—Cured, 1.
Menorrhagia, 4.—Cured, 3; relieved, 1.
Amenorrhœa, 2.—Cured, 1; under treatment, 1.
Ovarian dropsy, 2.—Stationary, 2.
Malignant tumor in pelvis, 1.—Dead, 1.

The case which I regarded as inflammation of the uterus is subjoined. I have reason to believe that the symptoms originated in immoderate sexual intercourse, without regard to the presence of the menses.

Hysteritis.

Sarah Constantine, ætat. 28.

March 12th, 1836. Was married a month ago. Complains of very severe constant pain between the pubes and sacrum, extending over the lower part of the abdomen, down the thighs, and across the loins, aggravated by firm pressure in the pubic region. Pulse 106, sharp; skin hot; tongue white; considerable thirst; bowels confined. Menstruated copiously a fortnight ago, the discharge having suddenly ceased last week, cotemporaneously with the supervention of the present symptoms.

Fiat Venesectio, ad ℥xii.; Hirudines, x. regioni pubis; Haustus Salin. c.; Magnesiæ Sulphatis, ℥i. 4tis horis.

13th.—Pain unabated; bowels free. Blood was a large firm coagulum, but without buff.

Repetantur Hirudines. Fotus Papaveris abomini.

℞ Calomel, gr. iii.; Opii, gr. i. M. fiat Pilula, 8va q. q. hora sumenda. Ol. Ricini, ℥ss. cras mane.

16th.—Has progressively improved since last report, having but little pain, and bearing pressure with slight inconvenience.

The mercurial was continued in diminished doses till the 28th, when her mouth became affected. She was discharged on the 1st of April, cured.

DISEASES OF THE ARTICULAR AND FIBROUS SYSTEMS—56.

Rheumatism (acute), 32. — Cured, 30; under treatment, 2.
Ditto (chronic), 20.—Cured, 14; relieved, 6.
Gout, 1.—Cured, 1.
Periostitis, 3.—Cured, 3.

Further experience has tended to confirm the observations I made in my last report, on the superiority of bleeding and purging over every other method, in treating acute rheumatism at its onset. It is the only treatment by which I have seen the disease at once speedily and effectually arrested; but it it is necessary to put it in force boldly, and at a very early stage of the attack, to produce this result. Of the above cases of acute rheumatism, several had more or less affection of the pericardium, but those only have been entered under the head of pericarditis, in which the inflammation of that part constituted the prominent part of the attack.

One of the cases of acute rheumatism ended fatally, not by affecting either the heart or membranes of the brain, or the pleura (the first of which is a very common, and either of the latter an occasional event), but by giving rise to suppuration in the joints chiefly implicated. Of this I have seen four cases, and therefore look upon it as an occurrence much less rare than medical authors generally would lead us to suppose. I believe, too, that such cases are marked by peculiar characters in the general disturbance, and by extreme obstinacy in the local affection. In the instance which is subjoined, I gave it as my opinion, three weeks before the event occurred, that the patient would die, and that suppuration would be found.

Acute Rheumatism ending in Suppuration.

George Coombs, æt. 31, admitted November 23, 1836, at which time he stated that he had suffered from pains in his limbs for about a month.

He had then no pain except in the left knee, where it was still severe. There was no swelling nor redness, and he could bend it without much uneasiness, but complained greatly when the limb was straightened. His pulse was 90, soft; tongue clean; bowels open; and altogether there was but little general disturbance.

He was blistered just above the knee; took Dover's powder at night, and was purged.

By the 29th he had little pain remaining; took his food, and appeared so well that it was in contemplation to discharge him.

Dec. 1.—Had a rigor yesterday, followed by heat and copious sour sweating. To-day has pains in his limbs generally, particularly in both knees and shoulders; headache; pulse 100; skin hot; tongue white and clammy.

Calomel, gr. v. h. s. hac et crastina nocte. Haust. Sennæ omni mane.

8th.—Febrile symptoms subsided on the 3d, at which time rather a copious eruption of herpes labialis appeared. Pains in the joints above-named, however, continued, for which he had

Pulv. Ipecac. Comp. gr. x. om. nocte,

and appeared to be going on well till last night, when he had another rigor, with nausea and vomiting. Pulse 100; skin hot; tongue slightly furred, dry. Complains much of the pain in the limbs.

Calomel, gr. iii. sexta quaque hora. Haust. Sennæ, omni mane.

15th. — Has progressively improved. Gums sore; pains entirely gone; no stiffness or other remains of the affection of left knee, on account of which he was admitted.

Extract Colocynth Comp. gr. v. om. nocte. Omitt. alia.

19th.—Had an attack of shivering the night before last, since which time he has suffered from pain in both knees, particularly the right. Has also some pain under the sternum. No anormal sound to be perceived. Pulse 108; tongue brown and clammy; mouth well.

Hirudines xii. parti sterni inferiori. Calomel, gr. iii. quamprimum et hora somni. Haust. Sennæ cras mane.

22d. — Pain of chest relieved; other symptoms unchanged. Has had gr. ii. of

calomel every six hours. Gums beginning to be affected. Great pain in the limbs generally; pulse 100, throbbing.

Rep. Calomel cum Opii, gr. ½, sexta quaque hora.

24th.—Left ankle painful and swollen, with some redness of the integuments; also some swelling of left elbow, with redness extending about two inches up the outer part of arm; much anxiety of expression; pulse 116; tongue loaded; gums have a perceptible red line, but not to a greater extent than two days ago; bowels open.

Rep. Pil. Calomel c. Opio, ut.antea.
℞ Liq. Acet. Ammoniæ, 3ij. Oxymel, 3j. Aquæ, 3ix. M. sumatur 6ta quaque hora.

26th.—Knuckle of left middle finger red, swollen, and very tender.

28th.—Pain over the whole of left arm, from the middle finger (the first joint of which is very red and much swollen) up to the shoulder.

31st.—Swelling of the finger-joint diminished, and that above elbow has disappeared, but still has considerable pain up the arm and in both shoulders; pulse 100, jerking; copious acid perspirations continue.

This concludes the year, and with it the period to which the present report extends. I may, however, complete the case by briefly stating that the patient, on the subsidence of the affection of the left hand, complained next of the right knee, which became swollen, the synovial membrane being evidently distended, while the limb was habitually retained in a half-bent position. He had opiates administered, and light nourishment, while his bowels were kept gently open. He continued to suffer great general distress and anxiety, which, however, never at any time was attended with delirium. He gradually sunk, and died on the 12th of January.

The body was examined next day. The right knee was distended and fluctuating; on opening it, about half a pint of thin purulent matter, with some flocculi, was evacuated. The cartilages were entire, and of healthy appearance; the synovial membrane was redder than natural, and pushed upwards under the quadriceps muscle, by the effusion it had contained. The metacarpal joint of the finger which had suffered, was next opened. The flexor tendon was softened, and seemed sodden, and deprived of its silvery lustre (it had been observed before death, that he never extended the finger, even after the inflammation had subsided); the articular surfaces red, roughened, and smeared with a thin layer of pus. The left ankle, which seemed to have been the third in the degree of suffering, was next examined, but no morbid appearance observed. The viscera generally looked pale, and were very soft. Neither the pericardium nor heart had any morbid change, except that there was a little thickening of the mitral valves. There were from two to three ounces of fluid in the ventricles of the brain.

EXANTHEMATA, AND ACUTE DISEASES OF THE SKIN—9.

Erysipelas of face and head, 4.—Cured, 2; dead, 2.
Scarlatina, 1.—Cured, 1.
Rubeola, 1.—Cured, 1.
Pompholix, 1.—Cured, 1.
Urticaria, 1.—Cured, 1.
Purpura hæmorrhagica, with apoplexy, 1—Dead, 1.

We are told in books, that when patients die of erysipelas of the head, the membranes of the brain are generally inflamed. Is this the fact? That it frequently is not so, I am convinced; having repeatedly examined such cases without finding any thing of the kind. The two fatal cases entered in the above list are instances of this, the brain and its membranes having been perfectly healthy in both.

The case of purpura hæmorrhagica was interesting; chiefly on account of the post-mortem examination, which shewed the hæmorrhagic tendency to be so great that some even of the articular cartilages had participated in it. Yet it is curious that, on the body being taken to the dissecting-room, which was afterwards done, the injection did not show any disposition to become extravasated.

Purpura ending in Apoplexy.

James Glennerson, ætat. 48, labourer.

Admitted, under the care of Mr. Babington, October 21st, at which time the principal symptom was hæmorrhage from the mouth; the gums and tongue being covered with purple bleeding spots, and the trunk and limbs having numerous spots of purpura scattered over them. He passed blood with his urine—some by stool. He took sulphuric acid, and afterwards sulphate of quina, together with laxatives, and had a gargle of chloride

of soda, the fœtor of the mouth being extremely offensive.

He came under my care on the 27th, at which time the bleeding from the mouth had ceased, and the spots were dying away. He continued apparently convalescent, and the purpura had almost entirely disappeared, when—

Nov. 10th, the spots were observed to show themselves on various parts of the body, particularly the abdomen and lower extremities. There were also several on the tongue, and from these the blood again began to ooze rather freely. Pulse 92, full and strong; skin hot; tongue clean, except at the site of the purpura; bowels open from medicine.

Mittr. Sanguis, ad ℥x. Habeat Acid Sulph. Dil. ℿx. tertia quaque hora ex aquæ pauxillo.

11th.—Blood drawn yesterday exhibits a very large coagulum, the serum appearing to have separated but imperfectly; buffy coat half an inch thick. Hæmorrhage from the tongue has almost ceased; pulse and skin as yesterday; bowels have not acted to-day.

Calomel, gr. iii. quamprimum. Haust. Sennæ post horas tres et cras mane nisi prius responderit alvus.

12th.—Bowels freely purged yesterday after the visit. Had a recurrence of hæmorrhage from the mouth last night, and lost nearly half a pint of blood. Pulse 104, bounding; skin hot. Tongue has only one or two spots upon it, and is but little swollen: the bleeding comes chiefly from the gums.

Fiat Venesectio ad ℥x. Habeat. Ol. Terebinthinæ, ℥ss. quamprimum et cras mane, ex Aquæ Menth. Virid. ℥iss. Gargarisma ex Chloride Sodæ.

13th.—Blood exhibits a very thick buff (above half an inch); serum scarcely separated from the coagulum; much less bleeding from the mouth; bowels freely purged, and motions dark, apparently from the admixture of blood; pulse 93, softer; skin cooler.

14th.—A good night; little or no bleeding from the mouth; pulse 100, full, but soft; bowels have acted twice moderately, motions still dark; spirits depressed—almost hysterical; begs earnestly for meat and porter, which request has not been complied with.

Rep. Ol. Terebinth. cras mane.

15th.—Mr. Hammerton (the apothecary of the Hospital), was sent for a little after midnight, when he found him in an apoplectic fit: he opened a vein, but without avail; the patient expiring in little more than half an hour from the first appearance of the cerebral symptoms.

Autopsy.—Body pale, with numerous purple spots. On removing the skull cap, a small quantity of serum exuded from beneath the arachnoid membrane; the convolutions were much flattened, and at the anterior part, imbedded in the arachnoid, were two or three flat bony deposits, of various sizes, the largest not exceeding the circumference of a shilling. On slicing off the lobes, a coagulum, about half the size of a pea, was found imbedded in the substance of the left hemisphere. The ventricles contained a considerable quantity (℥iiss. or iij.) of serum. At the base of the brain, covering the cerebellum and medulla oblongata, there was a thin layer of extravasated coagulated blood; this was traced into the right lobe of the cerebellum, where it formed a coagulum about the size of a large walnut, imbedded in, and breaking down, its substance.

The spinal marrow throughout appeared natural.

The lungs were healthy; some purple spots in the pleura costalis. The heart of normal size and consistence, but having some purple spots on its outer surface. The aorta thin and brittle, so as to be easily torn. The stomach had an ecchymosed appearance externally; internally were numerous stellated reddish spots. The liver healthy; no spots. The spleen rather above the usual size; nothing remarkable in its appearance. (A minute supplementary spleen, about the size of a chestnut.) Bowels spotted here and there throughout their whole extent. Kidneys presented stellated spots externally: the pelvis of each of a deep purple colour, apparently from blood extravasated beneath the lining membrane.

The right knee being cut into, shewed several purple spots on the synovial membrane.

The body being unclaimed, was carried to one of the anatomical schools, and dissected. The injection ran well, and no extravasations were observed to have been occasioned by it. On cutting down upon and examining some of the spots of purpura, they were found to consist of a minute layer of extravasated blood on the surface of the cutis.

FEVERS—23.

Intermittent, 5.—Quotidian, 2; tertian, 3; cured, 5.

Continued, 18.—Cured, 16; convalescent, 2.

During the year 1835, eleven patients were admitted under my care for continued fever; of whom one died. In 1836, eighteen have been treated, among whom there has been no death: the two years thus giving only one death in twenty-nine cases. This may

be regarded as a small rate of mortality; but it must be added that the type of fever has not generally been severe. During the last two months of 1836, however, the cases became more formidable, some of them being accompanied by petechiæ, with great debility, and local complications. Without presuming to offer an opinion on other methods of treatment, which I have not seen tried on a scale sufficient to enable me to judge of them, I may be allowed to say that while so large a proportion of the patients do well, I find no temptation to abandon the practice I have long pursued of giving mild mercurials, and regulating the bowels by gentle laxatives. The coincidence, too, of the gums exhibiting the mercurial action, and the symptoms subsiding, is too constant to be the result of accident, and must depend either upon such action overcoming the fever, or the subsidence of the fever allowing the mercury to produce its peculiar effect. Supposing it to be only the latter, the results shew that the mercury does not prevent this favourable change from occurring.

DROPSY, NOT APPARENTLY CONNECTED WITH ORGANIC DISEASE—3.

Cured, 2; dead, 1.

CASES OF POISONING—3.

With arsenic, 2.—Dead, 2.
With oxalic acid, 1.—Cured, 1.

Henrietta-Street,
Cavendish-Square, Jan. 20, 1837.

CASE OF AN EXTENSIVE ENCYSTED HEPATIC ABSCESS, WITH HYDATIDS.

To the Editor of the Medical Gazette.

Sir,

One frequently hears the notion broached that hydatids exert a peculiar malignancy over the body in which they are situated; but the length of time which we may presume to have elapsed, in the following instance, from the formation of the primitive hydatid, to the period when they had accumulated a thousandfold (the patient, meanwhile, labouring under no affection which might not have been ascribed to the mere bulk and situation of the tumor), as far as an isolated case is valuable, disproves the assertion.

I had the opportunity afforded me of assisting at the post-mortem examination, through the kindness of Mr. Robert Clarke, a practitioner of this town, whose patient the woman had been from the commencement to the termination of her malady.

I am, sir,
Your most obedient servant,
R. H. Allnatt, M.D.

A young woman of respectable connexions, residing at South Moreton, Berkshire, aged 29, of strumous diathesis, who had long been suffering under anomalous symptoms, the cause of which was not apparent, was suddenly attacked with rigors, and distressing dyspnœa, nausea and vomiting, accompanied by a swelling, and a sense of great weight and pressure at the pit of the stomach. She had for some time previously been unable to lie in particular postures, and had suffered darting and lancinating pains which were principally referred to the posterior region of the thorax.

As she had been for a considerable period labouring under ill health, it was deemed unadvisable, in the present instance, to resort to harsh measures of treatment. Mild antiphlogistic remedies were therefore ordered, and a few leeches applied with a view of affording temporary alleviation, but to no purpose; the patient lingered for two days and died.

Inspectio cadaveris.—The body, externally, presented an emaciated appearance. A large circumscribed fluctuating tumor was discovered, situated in the epigastrium, bearing evident signs of recent inflammation. On cutting down to the liver it was found that the great left lobe was completely gone, and its place occupied by an encysted tumor of vast extent; the lateral and posterior walls, formed of the peritoneal covering of the lost lobe, were so morbidly thickened and indurated that they had assumed a fibro-cartilaginous structure. There was no vascular turgescence except at the base of the external tumor, and at this point the peritoneal and muscular coverings were so thin that a superficial incision, after turning back the dermal integuments, entered the abscess. It having been found impossible to dissect the sac from its attachments entire on account of its bulk and the extreme tennity of its anterior walls, a large incision was made

into it as it lay *in situ*. The effused fluid was exceedingly abundant, varying in colour and consistence as it occupied the upper or more depending portions of the abscess, and was filled with hydatids of various gradations of growth, from the size of a pea to the diameter of an inch and a half. Several of these acephalocysts were empty, and looked like floculi of coagulable lymph; others were flaccid, being half filled with a limpid fluid, and resembled flattened spheroids: these appearances I attribute to the length of time which had elapsed since the death of the woman, a period of sufficient duration to cause the partial decomposition of many of these thin and filmy bodies. It was the opinion of Mr. Robert Clarke, the gentleman who conducted the examination, and of his father, who was also present, that the tumor contained, at the most moderate computation, *considerably upwards of a gallon of effused fluid*, several wash-hand basins full having been successively carried away and emptied by the attendants.

The remaining (right) lobe of the liver was turgid, and its proper structure in such a state of *ramollissement* that it broke down under the slightest pressure. The gall-bladder, which was apparently untouched by the disease, contained a small quantity of thin, semi-transparent, unhealthy looking bile.

The thorax presented abundant traces of the former existence of disease. The parenchymatous tissue of the lungs was healthy, but the pleura pulmonalis adhered so firmly to the costal pleura that it required considerable effort to detach them. The heart, which was flaccid and slightly hypertrophied, adhered in places to the inner membrane of the pericardium; and the external layer of this investing membrane had frequent points of attachment to the diaphragm and mediastinum.

Remarks.—The foregoing case is chiefly interesting as it shows the enormous magnitude a tumor of the internal organs may attain, and the important lesions vital structures may undergo, without giving rise to an equivalent urgency of symptoms. Dr. Tweedie, upon the authority of Abererombie, states that "no less than *four pounds* of purulent matter have been found in a single abscess of the liver"; but here we have a tumor containing double, nay treble that quantity, and yet the patient continues in comparatively an uninjured condition for a considerable length of time. Mr. Cæsar Hawkins, speaking of encysted tumors, says, "that wherever hydatids are situated, little suffering is experienced except from the bulk of the tumor, as long as there is no great inflammation"; but he is here alluding, I presume, to the common encysted tumor, formed of a single hydatid. In the liver, however, the case is altered, for he says "the peculiar situation of these tumors may render them fatal at an earlier period than they otherwise would have been." I can only therefore account for the enormous extent of the tumor in question causing so little comparative inconvenience from its magnitude, by the apparent fact, that as the fluid became slowly deposited, the consequent distension of the sac produced a gradual absorption, and eventually usurped the entire situation of the left lobe of the liver.

Wallingford, Jan. 28, 1837.

INFLUENZA;

NATURE AND TREATMENT OF THE PRESENT EPIDEMIC.

To the Editor of the Medical Gazette.

Sir,

The immense number of persons labouring under the present prevailing epidemic, now raging in every part of England and Scotland, as well as on the Continent, has perhaps scarcely ever been exceeded; while in many cases the violence of the symptoms has caused a fatality as great as that by any scourge which has visited us for many years.

It may be difficult to refer this disease to any definite cause, or to prove whether it is occasioned by a morbid poison existing in the atmosphere, or depends on the many great and sudden changes of temperature that have taken place in the course of the few last months. But there can be no doubt of its being the duty of every medical man to determine by experiment the best mode of treating this affection, and as a vast number of patients have been daily falling under my care, I have been

led to try the comparative effects of bleeding and of withholding the lancet, and to send you the results.

The disease usually makes its invasion with alternating chilliness or shiverings, and flushings of heat, with a sense of extreme languor, and pain in the forehead and limbs, followed by a tenderness and fulness of the eyes, accompanied with a copious discharge of thin fluid; then supervene sneezing, sore throat, hoarseness, and a dry cough, a feeling of constriction across the chest, with difficulty of breathing, with pain in the back, depression of spirits, and great prostration of strength. The tongue is generally clean and often moist, the pulse quick and jerking, afterwards small and feeble, and the skin is for the most part in a state of perspiration; vertigo and delirium are not uncommon, neither are hæmoptysis and epistaxis; nausea, vomiting, and pain in the bowels with diarrhœa, are also occasionally present.

The pain in the forehead, dry cough, and delirium, were often of such extreme urgency, as that active depletion appeared not only to be justifiable, but essential to the safety of the patient, and I accordingly selected five cases in which I employed the lancet with no sparing hand. The bleeding, however, was quickly followed by an alarming and dangerous prostration of strength, with little improvement in any symptom, and at best by a very protracted convalescence, so that I was induced to abandon the lancet, and to adopt a more simple mode of treatment: in a series of cases of equal severity and nearly similar in every particular, I therefore, now prescribed, as in the former instances, Hydrarg. Chloridi*, gr. ij.; Extr. Coloc. Co., gr. viii. statim, and a draught every four hours consisting of Syr. Papav., Misturæ Acaciæ, aa. ʒj.; Liq. Ammon. Acet. ʒij.; Mist. Camphor, ℥i; while pediluvia, blisters, and mustard cataplasms, were used as occasional adjuvantia; at the same time enjoining restriction to a low diet for two or three days, then moderate and well-regulated support.

I have thus treated five hundred and eighteen cases with perfect success, for I am satisfied the patients have recovered with much less discomfort, at far less expense to the system, and within a much shorter period of time, than when the lancet was used. Indeed the convalescence may be said to have been in general fairly established on the fifth day in the last series of cases, while on the contrary, in that where venesection was performed, all the phenomena became greatly aggravated, and the patients were in fact unable to leave their beds for ten or twelve days, and sometimes even longer.

It is remarkable also, when the symptoms have so nearly resembled those of arachnitis, peripneumonia, pleuritis, or enteritis, which was by no means infrequent, as almost to warrant these several diagnoses, they have universally yielded to the remedies I have specified, without the loss of blood, and have neither been followed by the ordinary consequences of inflammation, nor with the distressing collapse and lengthened illness of the patients in whose cases bleeding was resorted to.

The greater advantages which have resulted from abstaining from bleeding in these cases, almost inclines me to adopt the hypothesis, that this disease does not depend on mere changes of temperature, but on the existence of one of those many atmospheric poisons which so often influence our health: especially as the practical result seems to be in accordance with those principles I have so often advocated through the medium of your journal: but I beg to add a case which involves no hypothesis, and which is distinctly in proof of bleeding very considerably aggravating the effects of a poison demonstrably introduced into the system.

On Wednesday, Jan. 18th, at one o'clock P.M. Mr. Belcher upon entering an apartment where ipecacuanha powder was being used for pharmaceutical purposes, was immediately seized with the most urgent dyspnœa, with a sense of constriction across the chest, accompanied with violent and convulsive cough, which, together with the sneezing, continued for some time, until at length his countenance became anxious and livid; his eyes were suffused, and he complained of a dry, burning sensation in the fauces, amounting almost to suffocation; his pulse was rapid. He was instantly removed from the room, and I prescribed, Sp. Ætheris Sulph. Co. ʒiss. ex Mist. Camph. statim; which I directed to be repeated at short intervals, until the symptoms were relieved. At the end of twenty minutes

* Calomel.

there was a marked improvement, his breathing first becoming freer, and all the other symptoms gradually subsiding, so that in the evening he was quite well, and resumed his ordinary occupation on the following morning.

This singular idiosyncrasy has manifested itself in this individual as many as a dozen times, when he has always been bled, and subsequently blistered. Dr. George Gilbert Currey was the first to recommend bleeding in Belcher's case; the practice has since been repeated, and he has invariably been confined to his room for four or five days; indeed, I treated him myself by bleeding, under the same circumstances and with like result twelve months since.

A German physician, Dr. Prieger, has published a remarkable case of a person, who, in consequence of inhaling the dust of ipecacuan powder, was attacked with a sense of tightness in the chest, vomiting, and soon after an alarming sense of suffocation, from tightness in the throat. When these symptoms had continued several hours, and bleeding had been ineffectually resorted to, the uneasiness in the throat was removed after the use of a decoction of uva-ursi and rhatany root: but the dyspnœa remained several days*.

My case of ipecacuanha, as it appears to me, strongly illustrates a doctrine long inculcated by Dr. Williams, with respect to this class of diseases, and, as far as my experience has gone, acted upon with admirable effect by that physician.—I remain, sir,

Your faithful servant,

HENRY BULLOCK, M.R.C.S.

St. Thomas's Hospital,
Jan. 28th, 1837.

ACCOUNT
OF AN
ANOMALOUS DISTRIBUTION OF THE BRANCHES OF THE AORTA,
AND AN UNUSUAL COURSE OF THE RIGHT SUBCLAVIAN ARTERY.

To the Editor of the Medical Gazette.

SIR,

SHOULD you deem the following account of an anomalous distribution of the arteries arising from the arch of the aorta worthy of insertion in your valuable journal, you will much oblige

Your obedient servant,

FRANCIS HIRD,
Late Secretary to the Dublin Medico-Chirurgical Society.

Finsbury-Square,
Jan. 26, 1837.

The subject of this anomaly was a male, of middle age, rather tall, and of muscular frame. The irregularity in the distribution of the arteries was not confined to the cervical region, there being a high division of the brachial artery in the left upper extremity: the left hepatic artery arose from the abdominal artery itself, and there were two renal arteries on each side; but the irregularity to which I wish to draw attention was from the transverse portion of the arch of the aorta.

From this portion of the aorta two branches were given off, the larger arising from that part of the artery which in the regular distribution gives origin to the arteria brachio-cephalica: the other was the left subclavian. The first of these, a thick trunk a little more than an inch in length, was directed towards the left side of the neck, and bifurcated about the middle of the trachea into the arteria brachio-cephalica and left carotid, which arteries subdivided as usual, but the situation of the former, and its continuation, the right subclavian artery, were greatly altered in relation to the surrounding parts: they were situated much higher than usual; the subclavians passed anterior to the scalenus anticus muscle—a course that has very rarely been observed. This abnormal distribution of arteries is, with a slight modification, the normal conformation observed in a great many animals occupying an inferior station in the scale of gradation: in several of the quadrumana, of the glires, in the lion, hyæna, bear, marmot, guinea pig, &c.

There was a small triangular space formed over the front of the trachea, bounded on the right by the arteria brachio-cephalica, on the left by the left carotid; its apex being formed by the decussation of these arteries, and its base by the thyroid gland.

The vertebral artery was larger than natural, remarkably superficial, and ascended as high as the second cervical vertebra before entering the foramina in their transverse processes.

* Rust's Magazin für die gesammte Heilkunde, 32, 182.

The phrenic nerve descended along the outer margin of the scalenus anticus muscle, crossed the subclavian artery at a right angle, lying immediately upon it, still situated at the external border of the muscle.

An accurate acquaintance with the abnormal distribution of parts appears to me to be almost as indispensably necessary to the operative surgeon, as a knowledge of their natural arrangement. It is no light thing to have life intrusted into our hands; the rules of our art are not invariably precise and certain; and it is the imperative duty of every one to avail himself of every opportunity of acquiring practical knowledge. The possibility of such a distribution as I have mentioned points out at once how necessary it is to be cautious in performing the operation of tracheotomy: the life of the patient probably depends on the direction of the edge of the knife, for in the natural arrangement, in which I have seen several operations performed with the cutting edge of the knife, in a case like the one I have mentioned it might prove destructive to life. Hence the necessity of establishing a general rule of cutting from below upwards.

In tying the subclavian artery in the third division of its course, the blade of the knife ought never to be used after dividing the integuments, platysma myoides, and cervical fascia; for if this caution be not duly observed, instantaneous dissolution might be the result, either from a wound of the artery itself when taking a course as in the case just related, or from a division of the phrenic nerve, should it chance to be situated at the outer margin of the scalenus anticus muscle, our principal land-mark for laying hold of the artery when operating in this situation.

In securing arteries it cannot be too strongly impressed on our mind the necessity of trying what effect constricting the part included in the ligature has upon the pulsating tumor, when operating for aneurism, or what impression is made on the hæmorrhage in cases of wounded arteries; for the wrong vessel, and even nerves, have been tied by eminent surgeons for want of this precaution; and in operating upon the neck, where the vertebral artery, as in the above case, is larger than natural, superficially situated, and ascending parallel to the carotid as high as the second cervical vertebra, although the latter is contained in a dense sheath, along with the internal jugular vein and pneumogastric nerve, the greatest caution is requisite lest the one be mistaken for the other, and the wrong vessel secured, and thus the sufferings and danger of the patient considerably augmented.

CLINICAL AND OTHER MEDICAL INSTRUCTION AT PARIS.

To the Editor of the Medical Gazette.

Sir,

In your number for October 29, 1836, there is an account of the state of public instruction in France, which seems to call for a few remarks.

It is evident the writer received the information given him with no unjustifiable scepticism. We are told that the physicians and surgeons devote daily two hours in the wards of the sick, and afterwards retire to the operating theatre to deliver one hour's lecture on the most interesting cases in the wards.

Now, admitting that it was unnecessary to specify Sunday as in some degree an exception, is it seriously meant to be affirmed that the physicians and surgeons in general "devote daily," &c.? If this be really the case, will this intelligent English student on a future occasion inform us in a general way how many pupils attend the visit of each of these physicians and surgeons, and how many of them remain to the end of the lecture. On this subject I suspect that some one has been practising on his "*bonne foi.*"

That the zeal of the French physicians and surgeons in giving clinical instruction is often very great, I willingly admit; but such unqualified assertions as the above are calculated rather to mislead than to enlighten those English students who may have thoughts of visiting Paris.

There is one point which correspondents from Paris seem to be shy of touching upon, and that is, the exclusion of pupils in general from the wards, except during the visit of the physicians and surgeons. This, of course, almost entirely prevents the possibility of a pupil's taking cases, and making

quiet observations for himself,—advantages so fully afforded in some of the London hospitals.

We are told that "les internes, in the absence of the surgeon, direct whatever treatment they think most proper;" that "if required, they may perform any operation in the absence of the surgeon; thus performing the duties of an assistant-surgeon in our English hospitals." Now I cannot pretend, from recent observation, to assert that the internes have not such an extensive privilege of interfering in the treatment of the patients as is here attributed to them; but if they have, matters seem to me to be strangely altered of late years. In one point of view, indeed, this privilege may not be considered so very great, as the surgeons, by their daily visits, are not likely to leave much to be done in the intervals. However, I imagine that there is some exaggeration in this matter.

Five thousand bodies annually for dissection sound most magnificently to the ears of those accustomed to dissect in the English schools of anatomy; but if there is the same haste that there was some years ago among the "garçons," in throwing away parts still in a very fit state for dissection, this magnificent supply will be found in actual value to be of a much more moderate character. It must not be forgotten that a large proportion of the subjects have previously undergone a thorough post-mortem examination in the hospitals*.

The gratuitous system of education as pursued in Paris has called forth the praises of many who have not, perhaps, duly considered the great waste of time that it indirectly occasions to the diligent student, by the crowding after popular lecturers, and the difficulty of getting a tolerable seat, unless by a long and wearisome waiting on the benches.

It operates injuriously also in this point of view, that the same individuals frequently attend courses on the same subjects, at different places, so that if in despair of getting near the lecturer, (on chemistry, for example) at L'Ecole de Médecine, you hope to be better placed at "La Sorbonne," or elsewhere, you have a chance of finding yourself still thrown in the background, and that in a great measure by the very same individuals. If you attend the lectures of a Professor who is not popular, you are disturbed by the coming in and the going out of the pupils, to say nothing of their skipping along the benches. It is, I think, the late Monsr. Bertin, of whom the anecdote is related, that when pupils were coming in towards the end of his lecture, he used to say, "Messieurs, ma leçon commence à ——" naming the hour, as if he supposed them to have mistaken it.

I understand that a professor who was formerly in the highest favor with the Parisian students, now addresses comparatively empty benches, until the crowd begins to flow in for the next lecture.—I remain, sir,

Your obedient servant,

EDWIN HARRISON.

Jan. 30, 1837.

* Bodies altogether unopened form quite an exception, and are, I believe, *generally* obtained by special agreement with an *interne* or other official person.

MR. PHILLIPS'S REPLY TO MR. EVERITT'S ADDITIONAL REMARKS ON THE NEW PHARMACOPŒIA.

To the Editor of the Medical Gazette.

SIR,

I REGRET that I am compelled again to address you. I shall do so as briefly as possible.

Mr. Everitt observes that by "a curious coincidence" the same misprint of *three* for *two* occurs in my translation as in the original: surely Mr. Everitt does not expect that I should remember the quantities of ingredients used in every formula; or that when no doubt arose, I should on every occasion refer to original documents.

The statement is repeated by Mr. Everitt, that one measure and three quarters of water are more nearly required than two measures, to reduce one measure of the stronger solution of ammonia to the weaker one. This is not the case: when these fluids are mixed, neither expansion nor condensation occurs; and calculation coincides with experiment to prove, that when two measures of water are mixed with one measure of solution of ammonia of sp. gr. 0·882, three measures of solution of sp. gr. 0·960 are obtained.

It is remarked by Mr. Everitt that I have omitted the word "*about*," used by him in directing the quantity of

water to be employed in a process: I admit the charge, but deny that the omission in any way affects the point at issue. He says that he did not intend to give the exact strength of the product: "I said, put '*about*' (a little word omitted by Mr. Phillips) 30 parts of water." I shall not question Mr. Everett's intention, but I must maintain that his directions are precise for obtaining solution of ammonia of sp. gr. 0·960; the word about applying only to the quantity of water to be put into the receiver, and not to the whole quantity to be obtained; for Mr. E. says, "by the time that the 30 parts of water in the receiver bottle have increased to 35 parts, nearly all the ammonia will have passed over." There is no *about* as to the sp. gr. of the solution, nor any as to its quantity; and either by putting water into the receiver, or by distilling it with the ammonia, directions are distinctly given for obtaining 35 parts of solution of ammonia of sp. gr. 960, from ten parts of muriate of ammonia.

Permit me to add, that corrections of some errors occurring in the translation, may be had of Mr. Highley, the publisher.

I remain, sir,
Your obedient servant,
R. PHILLIPS.

Jan. 31, 1837.

INFLUENZA,

AS IT HAS PREVAILED IN THE HOUSE OF CORRECTION.

To the Editor of the Medical Gazette.

SIR,

SINCE my letter addressed to you on the 5th of November last, remarking upon the almost total absence of active or inflammatory disease in the metropolis, we have been visited by one of the most direful scourges, in the form of influenza, that has occurred within the memory of the oldest practitioner, and which in its consequences will be found to have been far more fatal than the cholera.

This disease, upon its first appearance, so much resembled inflammation of the bronchial passages, that the profession in many instances were induced to recommend bleeding. It is for the purpose of entering my protest against this treatment that I have troubled you with this letter.

I shall confine myself to the treatment of the severe cases which have occurred in the House of Correction, and which have amounted, since the 27th of December to this period, to one hundred and five. Of these, ten have terminated fatally; the remainder either have recovered, or are in a fair way of doing so.

The urgent symptoms of fever, headache, and pains in the limbs, were soon relieved by the use of saline aperient effervescing medicine, which also quieted the nausea of the stomach. The oppression of the chest and difficulty of respiration were removed by the frequent applications of mild mustard poultices. In one instance only was I induced to bleed: no amelioration of the symptoms supervened. The blood shewed no appearance of inflammation, and a post-mortem examination convinced me that none existed. As soon as the febrile symptoms were subdued, even when the subsequent cough remained, I upon every occasion gave nutritious food, consisting of milk, broths, and most frequently the stimulants of wine and porter. This supporting plan I was induced to recommend from the fear of typhus fever following the great prostration of strength induced by the poison, and of which I had seen so many melancholy cases as the sequelæ of cholera.

The atmosphere still continues to be loaded with this fatal poison; it makes its attack upon the mucous lining of the bronchial passages, but does not deserve the appellation of bronchitis, a term which has been freely applied to it by the profession, very unscientifically I think, and likely to be productive of very erroneous treatment.

The rapidity with which some of the cases were carried off, where previous disease of the lungs existed, is hardly credible, and shews the concentrated character of the poison. I should very much like to be informed what the treatment has been in the large public institutions in London and the neighbourhood, and whether depletion has been employed to any extent.

I remain, sir,
Your obedient servant,
H. WAKEFIELD.

Lansdowne Place,
Feb. 2, 1837.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Compendium of Lithotripsy; or an Account of Removal of the Stone from the Bladder without Incision; adapted for general comprehension, with a Series of Statistical Tables, and numerous Wood-cuts representing the most important Instruments and Improvements up to the present time. By HENRY BELINAYE, Esq. Surgeon Extraordinary to her Royal Highness the Duchess of Kent, &c.&c.

DURING the last ten years, we have taken frequent opportunities of laying before our readers an account of the progressive advances in that most important improvement of modern surgery —the art of removing calculi from the human bladder through the urethra. The progressive steps in the discovery have been made so rapidly as to require considerable activity to keep pace with them, and on some occasions we had scarcely described one invention ere another yet more important had been added to it. Some account of the present state of the art, and some description calculated to bring the subject within the grasp of all, had become a great desideratum. Inventors are often influenced by a natural affection for their progeny, which leads us to receive their testimony with some degree of reservation; and they themselves fully understanding all the details, sometimes take for granted an equal degree of familiarity with the subject on the part of their readers, which has led to their descriptions being occasionally less complete and elementary than might be desired. Now from these two causes of imperfection, lithotripsy has suffered, as regards its literature, and we think that a very important service has been rendered to this interesting branch of surgery by the author of the "Compendium" before us. Mr. Belinaye having none of the weaknesses of parentage to mislead his judgment, gives a description of the instruments which (to use a phrase more pithy than elegant) is "adapted to the meanest capacities," while his opinions regarding them, and his general estimate of the operation, is evidently the result of minute observation and research. Here, therefore, we have the testimony of a competent and intelligent witness, free from any personal bias; and his evidence is of a nature to convince the most sceptical, not only of the abstract merits of the operation, but of the extraordinary mechanical genius and manual dexterity of Baron Heurteloup.

We strongly recommend the volume to those who are anxious to become acquainted with the progressive stages of discovery which have conducted to the present improved state of the art. For ourselves, we purpose merely to touch on one or two points, in order to show the manner in which our author has executed his task—not without the hope of inducing our readers to add the "Compendium" to their libraries.

Before we proceed to describe the instruments employed by Baron Heurteloup, it may be as well to make our readers acquainted with the bed (fig. 1) invented by him for the performance of his operations.

Three pieces of wood (A, B, C, fig. 1.) form the sides of the bed, and they are so joined as to form two right-angled triangles. They are united in front at the right angle, by a strong piece of wood (D D), and also by another of smaller size (E). The bed may be made to rest on the hypothenuse of the triangle by folding up the moveable portion (K K), which is done by unfastening the bar (M) which is fixed by a bolt at G. When this has been done, the bed rests upon B, which will now lie upon the ground. O, represents the mattress; S S, two pieces of wood, with slippers (U U), for the feet of the patient. In the space between D, P, D, is seen projecting a contrivance called the "support fixé," for giving steadiness to the instruments employed. It is also represented detached from the bed at 5, 3, 3.*

The next important step in the improvement of this operation seems to have been in the mode of grasping the stone, or rather of seizing it first, and then fixing it. To facilitate this, he invented an instrument having four branches instead of three, as had previously been the case, each admitting of being moved separately or simultane-

* For a full account of the "Lit Rectangle," and its numerous contrivances, we refer to the MEDICAL GAZETTE, vol. v. p. 266, *et seq.*

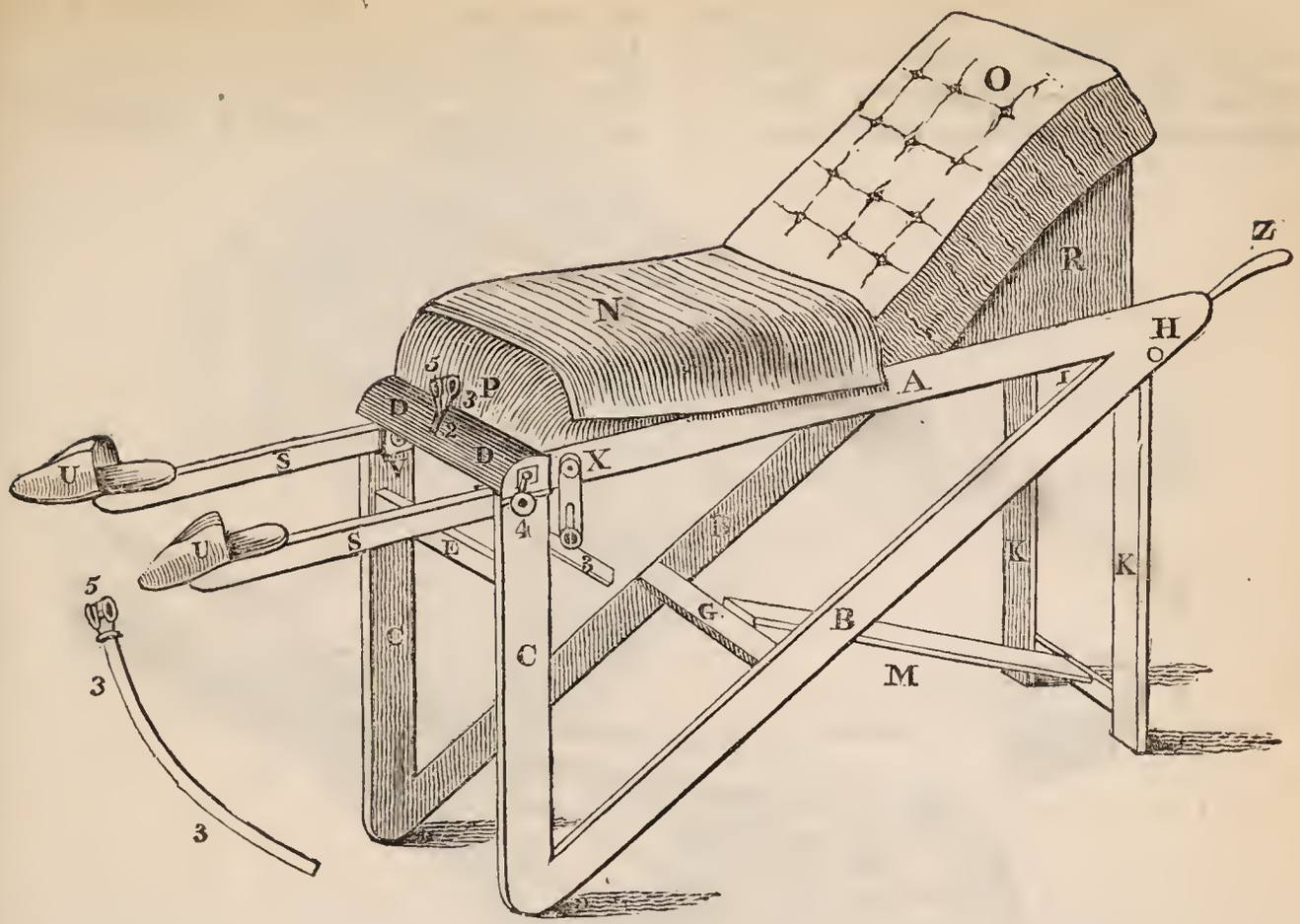


Fig. 1.

ously; so that when the stone had been caught, each branch could be individually adjusted, so as to render its hold more secure. The fourth branch had a button-shaped extremity, which formed the termination or point of the instrument when shut, while, being open, it assisted in grasping the stone (see fig. 2.)

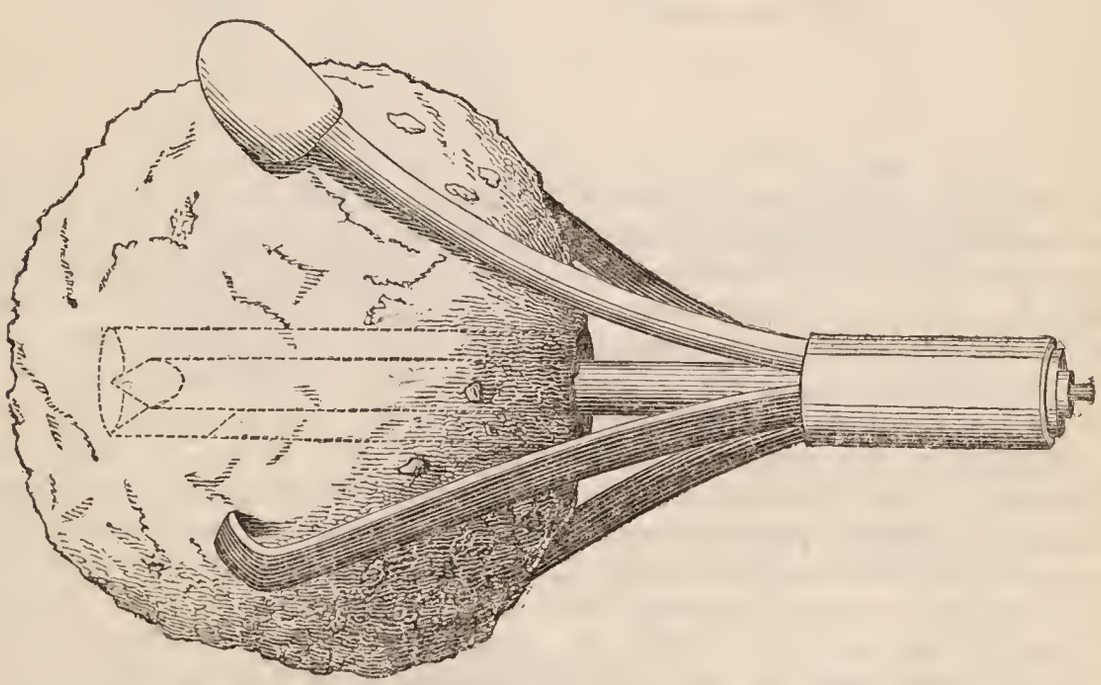


Fig. 2.

Sometimes the branches laid hold of the calculus in some awkward manner, not admitting of its proper adjustment by any of the ordinary means; and here we think one of the most ingenious and simple contrivances in the whole range of improvement presents itself. It is not difficult to imagine a person attempting to grasp in one hand a ball, very large in proportion to the length of his fingers, and having originally laid hold of it in the dark, in some

awkward way, he finds it impossible to improve his grasp without first letting it go — impossible, that is, unless he brings his other hand to his assistance. This is precisely what Baron Heurteloup does: he gives the instrument *another hand*, by introducing down through its centre a small three-

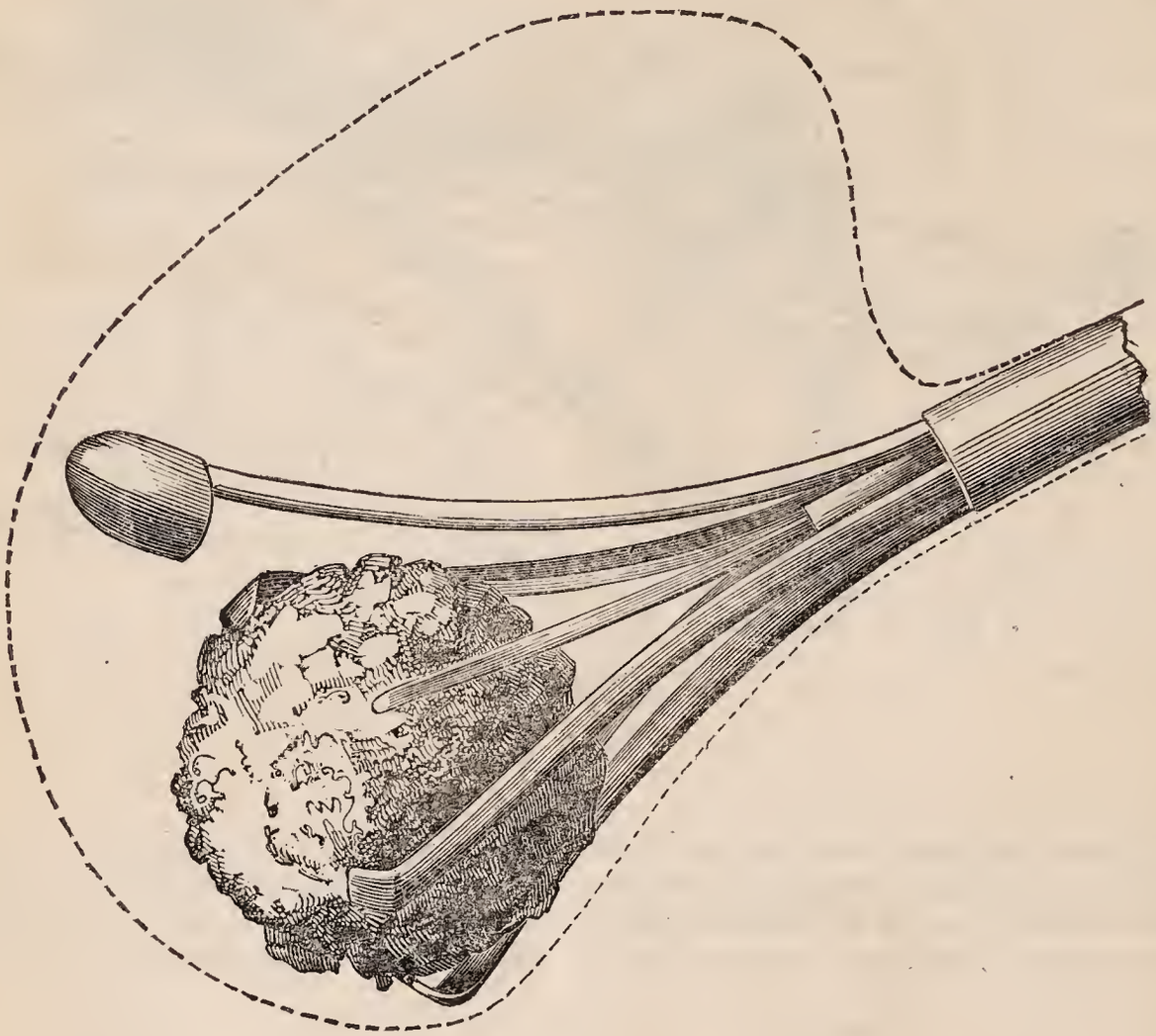


Fig. 3.

branch pincers, which he calls the "pince servante," and which may be seen represented in the above engraving, fig. 3. By this contrivance the calculus is adjusted within the branches of the longer instrument, in the manner desired by the operator. The "pince" being withdrawn, he proceeds to act with the borer. But a better idea than any verbal description can convey will be gathered from the engraving fig. 2, which represents a large spherical calculus grasped by the four-branch instrument, and perforated by the drill,— the latter being in outline. When the caculus has thus been bored to a sufficient depth (a circumstance judged of by graduated marks upon the portion of the instrument which remains external), the drill is withdrawn, and an instrument called the excavator introduced in its place. The object of this contrivance is to scoop out the interior of the stone, so as to reduce it to a mere shell:—here, too, however, we prefer appealing to the eye, fig. 4 exhibiting the action of the excavator when it has done its work effectually. Still there was the shell to get rid of; and the necessity of accomplishing this seems to have been the means of leading to a most important improvement in the principle of operating,—at least on stones of a certain size, — namely, that of breaking or crushing, instead of the slower process of rubbing or wearing them down. The instrument with four or even with three blades no longer served, and more simple and stronger mechanism became requisite. The desideratum was an instrument which might be closed upon the calculus if small, or its shell-like fragment, if it had required to be hollowed,—and farther, which might be

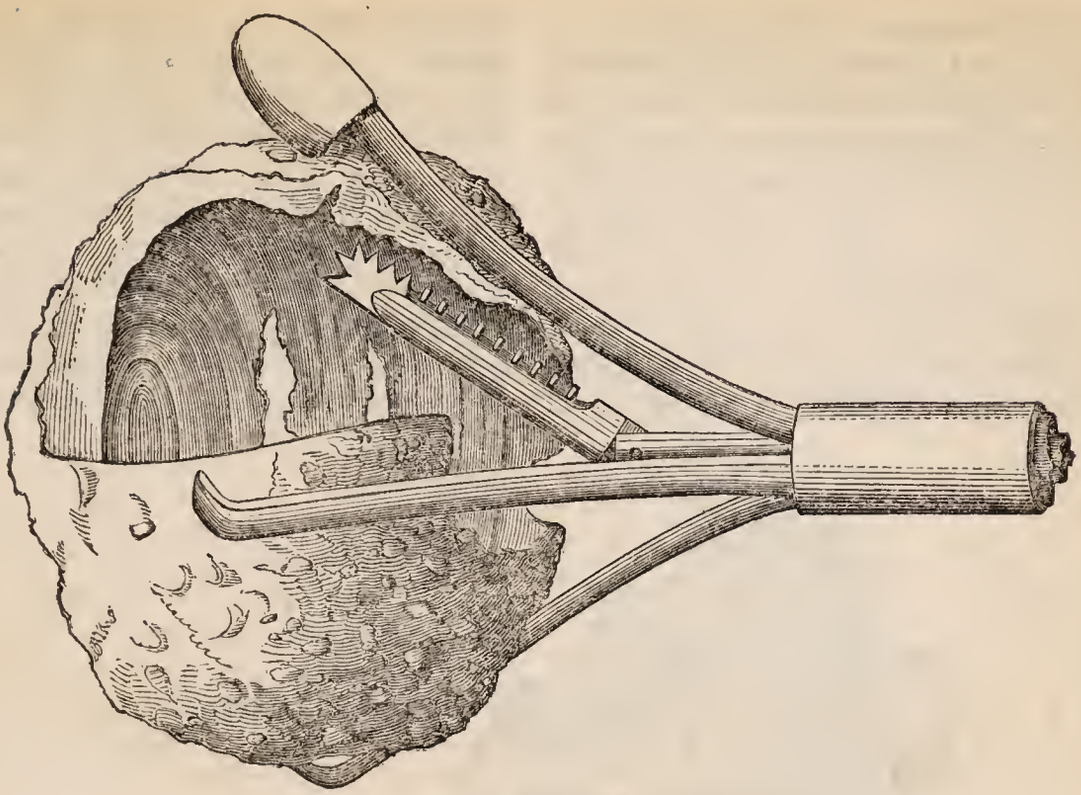


Fig. 4.

closed with considerable force. For this purpose he invented a kind of forceps, with two blades, so contrived that they could be drawn back into a sheath with power sufficient to pulverize a calculus of ordinary consistence. This was the *brise coque;* and here it is (fig. 5): the blades of which, so formed as to retain

Fig. 5.

their hold, are jerked back by means of a click and spring into the tube through which they pass. This instrument, however, is still better adapted for seizing a moderate-sized and long or oval stone; as seen in fig. 6.

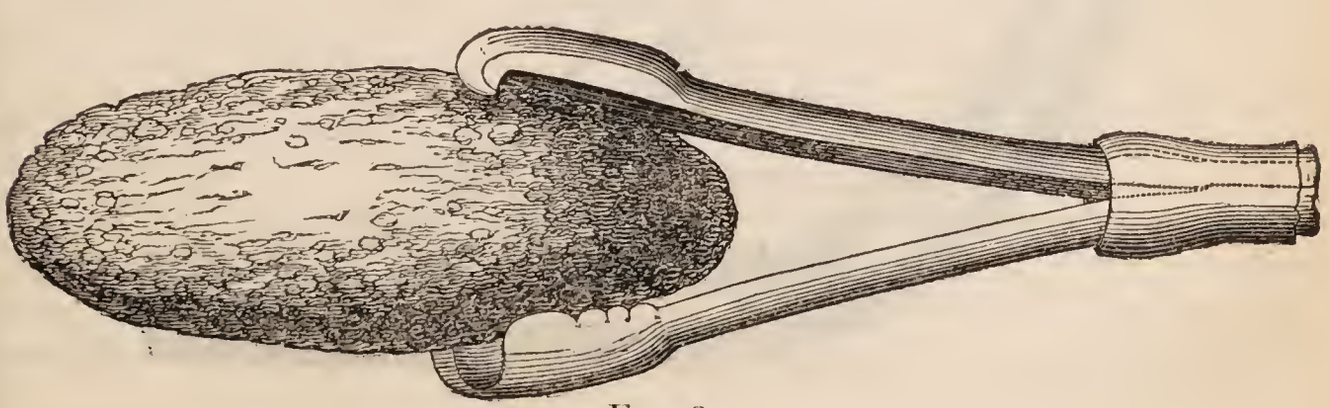


Fig. 6.

But the manner of breaking the stone,—at least where it is of a certain size and consistence,—was destined to undergo another improvement, in which the simplicity of the process is still farther advanced. This consists of providing it with a hammer. This sounds rather formidable, to be sure, when we reflect that it is to be used in the human bladder, and that, too, when the organ has been rendered irritable by disease: nevertheless, the problem has been solved. It consists in establishing a fixed point, against which the calculus is to be supported when it receives the blow,—a moveable blade, capable of striking it with sufficient force,—and lastly, keeping the whole clear of the sides of the bladder, that they may escape injury. Imagine fig. 4 in the centre of the bladder, distended by previous injection, and you have the "per-

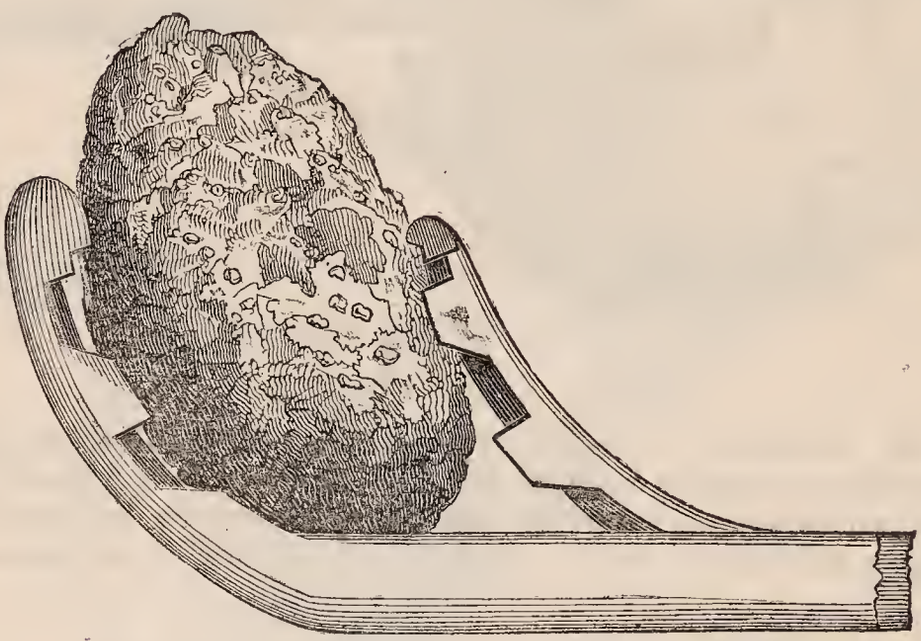


Fig. 7.

cussor" of Baron Heurteloup. Like the *recto-curvilinear* sound, it consists of a straight and a curved portion. As the reader looks upon it (fig. 7), the extreme portion on the left is the fixed point,—the other the moveable blade or hammer, which, sliding in a straight stem (cut short in the figure), admits of being pulled back and driven in again upon the calculus with sufficient force to break it. At one time M. Heurteloup thought of employing a screw, by which the plates should be gradually but very powerfully forced together, and the stone thus crushed; but the tendency of the steel to bend, and other reasons, induced him to abandon this—we believe entirely. Still there was some inconvenience, from the fragments, when broken off, being, as it were, lost in the bladder. This induced M. Heurteloup to give the instrument a hollow or spoon shape, with

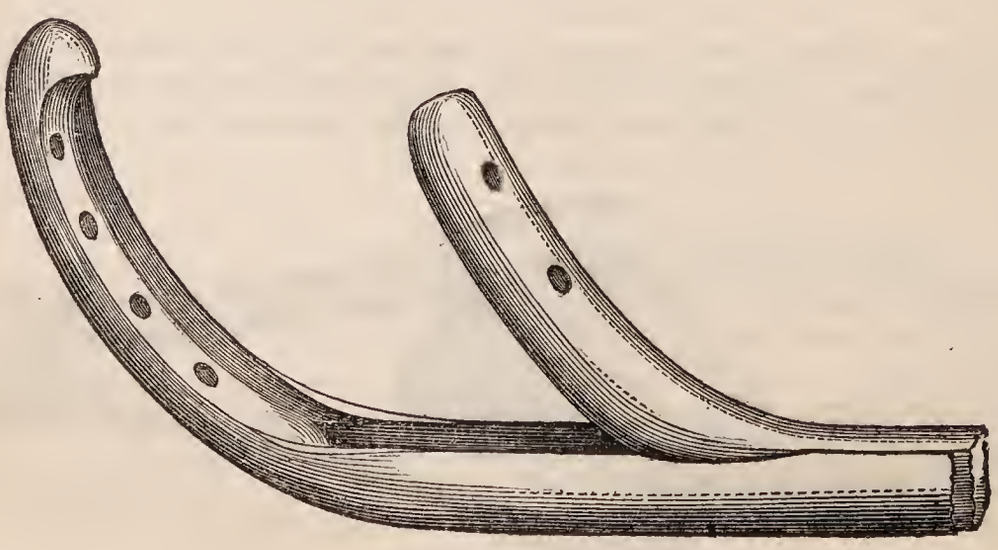


Fig. 8.

holes in it (fig. 8), so that when closed upon a fragment, and a few blows of the hammer are given "cautiously and judiciously," the superabundant portions are forced out through the apertures and at the edges of the instrument, which being then completely closed, is withdrawn with its cargo through the passage of the urethra, without risk or difficulty, as may be at once understood by glancing at the preceding figure.

Here we must close our account of this interesting volume. It is illustrated by nearly fifty wood-cuts, rendering the action of the instruments perfectly intelligible; and contains, in addition to the demonstrative part, many important considerations both theoretical and practical, together with numerous statistical tables connected with the subject of calculous disorders.

Reform der Heilkunst. (Reform of Medicine.) Von Dr. M. J. Bluff. Leipzig, 1837. Schloss.

Dr. Bluff is a diligent observer of the actual state and progress of medicine. He gives us here the result of his observations for several years back, and without meddling with the question of external arrangements (which is of late usually implied by the term Medical Reform,) points out what he conceives to be the material alterations undergone by the medical art within the present century. His remarks are interesting, and though not often profound, are characterized in general by their aim at practical utility.

Das Auge von dem Standpunkte der Medicinal Polizei betrachtet. (The Eye, in reference to Medical Police.) Von Dr. J. H. Beger. Heidelberg and Leipzig. 1836. Schloss.

A very curious essay on eye-quackery, eye-hospitals, the care which governments ought to bestow in preserving the eye-sight of their respective communities, eye-epidemics, &c.

Ueber die Anwendung der Ligatur bei Schlagaderwunden. (Application of the Ligature to Arteries.) Von Dr. K. J. Beck, Professor der Chirurgie, &c. Freiburg. 1836. Schloss.

We have in this brief monograph the results of the experience of a distinguished operator, whose object it is to determine under what condition of wounded arteries the ligature is to be applied, in a remote or a neighbouring situation. The illustrative cases will be read with interest.

Die Lehre von den Augenkrankheiten. (Elementary Treatise on Diseases of the Eye.) Von Dr. J. C. Juengken, Professor der Heilkunde in der Universität zu Berlin, &c. Berlin, 1836. Schloss.

This is a second and enlarged edition of Professor Jüngken's excellent textbook. It forms in its present shape one of the best works of reference; the literature is copious and well digested; and the tabular views of the diagnosis of inflammations of the eye are well calculated to convey much practical information.

MEDICAL GAZETTE.

Saturday, February 4, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

QUARRELS OF QUACKERY.

THE *NEW* UNIVERSAL MEDICINE.

"When rogues fall out," says the old proverb, "honest folk come by their own." We wish the simple honest folk who are so easily duped out of their *health* by designing knaves, could be equally fortunate; but they must be content if the quarrels of those rogues let them into a secret—how to *keep* "their own."

We observe, by the public prints, that a grand schism or defection has taken place among the Morisonian quacks. Salmon, the man who was convicted of manslaughter for having dosed to death Captain Mackenzie with "universal medicine," or, as he describes himself, "whose name has appeared so prominent in con-

nexion with Morison's pills," has split from his employers, and made some curious diselosures. He gives us an insight, for which we are much obliged to him, into the sort of traffic carried on by the "hygeian" party, and informs us of the kind of persons engaged in that trade. The most curious part, however, of this "plot discovered," consists in Salmon's confession of the badness of the pills whieh have for a long time been administered to the public. He says he frequently complained to the Morisons (for it seems there is a plurality of them) that the pills were not all right; but the hygeian presidents denied this, and would not admit that there was any imperfection: whereupon Salmon has appealed to the public, and exposes the alleged imperfections *seriatim*.

It was long ago shown in this journal that the pills in question, even were they harmless and fit to be exhibited, when carefully prepared, were likely to be rendered highly deleterious from the mode employed in manufacturing them on a large scale: one batch containing almost nothing but cream of tartar, for instanee, while others belonging to the same lot were wholly composed of aloes or gamboge, yet all being professedly of the same degree of strength. It was thus, we argued, that the misehievous effeets of the nostrum could readily be aeeounted for—some swallowing fifties together without damage, while others suffered death from the virulenee of perhaps a smaller dose.

All this is fully confirmed by Salmon. Having stated first his suspicions, and then his detection of the spurious nature of the pills, he thus sums up the points to which he attributes the misehief:—1, to the slovenliness with whieh the drugs are prepared; 2, the earelessness in mixing and eompounding them, eaeh pill not possessing the due and requisite quantity of each drug, and hence producing, as its natural consequence, a want of uniformity of operation; 3, the extremely *large* quantities required to be taken, owing to these defects [and the extremely *small* quantities, he should have added, whieh *ought* to have been taken in other cases, when the strong drugs fell to the lot of the unfortunate patient]; 4, the irregularity of size and shape of the pills, making it impossible to regulate properly the doses; 5, the extortionate price charged, and the short quantity given. Honest Salmon, no doubt, thinks this last item quite as bad as any in the list; and resolving to make pills of his own in future, promises to give better measure than the Morisons do, and for less money.

Of the badness of the old pills, he tells us he was quite convineed, and with the assistance of two other men, of the names of Bygrave and Hall, he is now resolved, he says, to offer for sale better pills than Morison's. This annouueement, made in the public papers, is, of course, wormwood to the grand "hygeist," and forth comes a counter-statement from the latter, warning the public against the new firm, and telling us who Messrs. B. and H. are: one of them, it seems, having been Mr. Morison's footman, and the other a carpenter employed in the pill manufaeture.

It is amusing to see how eoolly these people set themselves to work in geting up their new purging establishment. Salmon explains the process adopted in the present instanee. He was compunctious, we presume, about the misehievous properties of the old pills—those, namely, by which he committed manslaughter, and which led to his punishment—and "knowing that Messrs. Bygrave and Hall were prineipal assistants to the late Mr. Moat, and that they must necessarily be better acquainted with the compounding than either of

the two junior Mr. Morisons, who had no practical experience, and were not in *the firm* while Mr. Moat had the management," he got some medicine "brought out," as he calls it, by Messrs. B. and H., and "tested" (qu. by tasting, swallowing, &c.) its merits. The result is, that Messrs. Salmon, Bygrave, and Hall, have formed a coalition, and in the most patriotic manner offer to supply the public with the *only* genuine Morison's pills.

In other words, the matter may be thus stated:—Salmon, the tobacconist, and hitherto one of Morison's agents, having reason to know that he could make as good, if not better, pills than his employer, resolves to set up for himself; and having discovered the old original assistants—otherwise the footman and carpenter of "the firm,"—all three (viz. *the tobacconist*, *the carpenter*, *and the footman*) determine to manufacture, for the use of the public, pills more truly Morisonian than Morison's own. These pills are, of course, to cure *every* disease, and to be suited for every age, sex, and constitution: even "the babe of a day old may take them with perfect safety."

But the most remarkable circumstance yet remains to be noticed. These people have no difficulty in being regularly licensed to sell their new compound, and to tamper as much as they please with the health of the liege subjects. What a picture is this of the care bestowed on the public health by the government of the British Empire, and at such a time! It is but the other day, as we remember, that his Majesty was induced to grant a charter for the establishment of a new University, one of the avowed objects of which was to aid the cultivation of medical science, "in accordance with the spirit of this enlightened age,"—yet at this very time the royal sanction is granted to any quack who chooses to compound pills and offer them for sale. One hand is thus held out for the encouragement of the medical art, while the other receives the tribute, and affords protection to the most barefaced quackery. How the Minister can reconcile this with the wisdom of an age so superior as he has described it, to that of the seventeenth century, is a problem which we fancy he might not, if pressed, find it very easy to solve. But to return to the licensed marauders.

It was our first impression, as it still is, on observing the mutiny in the Morisonian camp, that it would be beneficial for the public; the captain of the gang is no longer to have all the booty,—his lieutenant thinks he has just as good a right to be leader, and to be indulged with a larger share of the spoil; but this produces a deadly feud, and the parties "peach" and inform on each other.

The result of this, it were easy to foresee, in any well-ordered community; but it is rendered doubtful, when we recollect the facility with which "honest folk" among us are gulled by the most shameless impostors. If any thing could open the eyes of a British public to the gross humbug practised on them by these so-called "hygeists," it would be by the self-exposure committed by these fellows. Salmon, the tobacconist, the faithful, *tried*, and accredited agent of the Morisonian firm, has confessed the "imperfections" attaching to the pills as manufactured hitherto, and offers a better article instead; he forms a new connexion with a footman and a carpenter,—and lo, the public are forthwith informed that they are to be supplied with a new and *better* "universal medicine," and with "cleansing powders"—good weight and measure—at a "saving of twenty per cent.!"

We cannot but think that the hint is broad enough for the meanest capacity. Salmon's "new light" must illuminate a large portion of the community.

TRIAL OF MR. PENRUDDOCK.

At page 715 will be found an account of the trial of Mr. Penruddock for an assault committed on certain members of the Court of Examiners at Apothecaries' Hall. The Worshipful Society proceeded against the prisoner for the capital offence, and had he been found guilty he could not have escaped with any punishment short of being transported as a felon. Now, however unjustifiable such an assault might be, still we apprehend that no dispassionate person can regard it as having been preconcerted, or as otherwise than the momentary ebullition of an impetuous temper, irritated by the disgrace of rejection; and viewing it in this light, we think it was both a hard and an injudicious measure to proceed against the prisoner on the capital charge. Had Mr. Penruddock been condemned he would immediately have become an object of sympathy, but this feeling can in no degree exist now that the capital indictment has been discharged, and he is merely to be prosecuted for the common assault.

DIVORCE OF THE BOROUGH HOSPITALS.

To the Editor of the Medical Gazette.

Sir,

Your last number contains a resolution purporting to proceed from the General Quarterly Court of Governors of St. Thomas's Hospital, held on Wednesday, the 18th instant.

I am aware that you are not likely to be deceived on such a subject; nevertheless, common justice to the governors of St. Thomas's compels me to suspend my judgment respecting the authenticity of this document,—first, because I find, by application at the Steward's Office of Guy's Hospital, that no copy of it has been transmitted to the persons whose interests are most directly affected by it; secondly, because some facts which, as an old student of Guy's Hospital, I have been able to ascertain with perfect certainty, make me unwilling to impute such a resolution to any body of respectable gentlemen. In the year 1760 it was proposed that the pupils of each hospital should have the advantage of attending the operations in the other. In 1768 regulations were passed, and engagements entered into, for the purpose of enabling the pupils of each hospital to profit still more extensively by the practice of the other, and of securing the discipline and good order of the students; and by one of these regulations it was provided, that the pupils in each house should be subject to the control of the treasurer of that house.

In 1825, the Committee of Guy's Hospital remonstrated against some acts of the Committee of St. Thomas's Hospital which seemed to be a violation of the existing compact. The appeal was without effect; and the Committee of Guy's Hospital, after duly apprising the other party of their intention, built an anatomical theatre, and took other steps for the completion of their own school. None of these steps, however, in the least interfered with the privileges previously guaranteed to the students. They were confirmed by an express resolution of the St. Thomas's Committee, passed subsequently to the transactions in 1825; and every student, in each hospital, pays his money upon the faith that he possesses them.

These being the facts of the case, I submit to you, sir, that the Court of St. Thomas's Hospital cannot have passed the resolution which you have printed;—they cannot have taken advantage of a transaction respecting which a law-suit is still pending, for the purpose of doing injustice to a large body of students who were in no wise concerned in the disturbance complained of;—they cannot have committed the gross prevarication of saying that they were not consulted about the measures adopted by the Guy's Committee, in 1825, which they know were the result of a long previous negociation;—they cannot have said that the union between the schools was dissolved in 1825, when it has existed for all purposes in which the public and pupils are interested till the present time.

With these doubts respecting the authenticity of the paper in question,

I am, sir,

Your obedient servant,

A Pupil of the Surgical Schools of Guy's and St. Thomas's Hospital.

Guy's Hospital,
Jan. 26, 1837.

[Sceptical as our correspondent may be, the document we published was authentic. —Ed. Gaz.]

CENTRAL CRIMINAL COURT—

WEDNESDAY.

(Before Mr. Justice Williams and Mr. Justice Coleridge.)

Charles Wadham Wyndham Penruddock, aged 22, described as a surgeon, was capitally indicted for feloniously wounding Thomas Hardy, with intent to do him some grievous bodily harm.

Mr. Adolphus (with whom was Mr. Jerningham) stated the case for the prosecution.

In detailing the facts of the case, as proved in evidence, the learned counsel stated that he felt bound to say that the young gentleman, the prisoner at the bar, was of a highly-respectable family, and belonged to a most honourable profession. The prosecutor was Mr. Thomas Hardy, one of the examiners at Apothecaries' Hall. On the day the prisoner committed the offence charged, he was a candidate for a medical certificate necessary to qualify him at Apothecaries' Hall. It appeared to the examiners that the young gentleman was well acquainted with surgery, which he had studied with credit to himself; but the examiners were of opinion that he was deficient in his knowledge of pharmacy, and the certificate he applied for was refused. The prisoner then, in a passionate state of excitement, inflicted a blow with an instrument, strangely called a "life preserver," and which would be produced to the jury—a blow that endangered the life of Mr. Hardy.

Mr. Thomas Hardy examined.—I am a surgeon retired from practice, and reside at Walworth. I am one of the examiners at Apothecaries' Hall. I was there on the day in question and saw the prisoner, who was one of the candidates for a certificate. I observed something very peculiar in his manner; he appeared to be labouring under much exeitement. He hastily took up pieces of sarsaparilla, which he bit and then threw down. I was in the room when the certificate sought for by the prisoner was disallowed. I saw the prisoner strike at Dr. Merriman, but I saw no weapon in his hand. I saw an instrument afterwards which I was told had been taken from the prisoner. During the time I was near the prisoner he looked hard at me, and said, "You are one of those who were hard with me." Immediately after that I received a violent blow on the head, but I am unable to state whether the blow was struck with an instrument or not. I became faint and partly unconscious in consequence of loss of blood.

By Mr. Phillips, for the prisoner.—There appeared to be a great degree of excitement about the prisoner. He spoke deridingly of the examiners. He said he would not be degraded by them in the eyes of his family; he would die, or he would *swing* first.

Mr. Randall, surgeon, confirmed the greater part of the above testimony, and proceeded to state that while the prisoner was under the examination of Mr. Este, he was asked the use of cubebs. The prisoner in reply said, "I know it very well." A person is not fit for an apothecary who does not know the use of it; but he did not seem to know the purpose for which it should be applied. Mr. Este said, "Don't you know that it is used for a specific discharge?" The prisoner replied, "Oh, yes." Knowing that he had been at St. George's Hospital, Mr. Este asked him if he had not seen it used there? He again said, "Oh yes." He was again asked as to its use, but he made no reply. He not answering, I said to the prisoner, "The gentleman means in what form and in what proportion is it to be used?" The prisoner turned round to me, and said, "how the devil can I answer questions if you are all *badgering* me in this kind of way?" My conduct to him at the time was mild and friendly, and not tending to irritate. After other questions were put, the prisoner attempted to excuse himself by saying, "I never could answer questions, even when at school, although I knew as well as any other boy." He was told that the answer was required, in order to show that his knowledge qualified him for practice. The examiners never wish to hurt the feelings of any candidate, but they have a very important public duty to perform, and he told the prisoner so. The prisoner replied hastily, "Sir, you have behaved very gentlemanly, and so has that gentleman (pointing to Mr. Este). The prisoner then said, "Pray examine me in anatomy; I understand that, for I have lived in a dead-house." The Court of Examiners is competent to examine in the science of anatomy, but it is the usual custom first to examine as to *materia medica*. Mr. Randall refused to examine the prisoner in anatomy, observing at the time that that branch of inquiry came more properly under the cognizance of the College of Surgeons. He (Mr. R.) said, if the first anatomist in the world was ignorant of matera medica and pharmacy, he would not be a fit person to receive a certificate of practice. It was then suggested that a few simple questions should be put to the prisoner, which not being promptly answered, Mr. Este, the chief examiner, observed that he could

not, consistently with his duty, consent to grant the required certificate. The prisoner then said to the examiners, "Your certificate is of no advantage to me in a pecuniary point of view, as I am going abroad and have good resources; but do you think I am going to be disgraced in the eyes of my family by such a set as you are? No, I'll be d—d if I will, I'd die first—I'd swing first!" The prisoner then arose from his chair, raised his right arm above his head, and aimed a blow at Mr. Hardy. I did not see anything in his hand, but afterwards I saw an instrument which is called a life-preserver, which was said in the prisoner's hearing to have been taken from him.

The witness was cross-examined at considerable length, but nothing was elicited to shake his examination in chief.

Mr. Tegart.—I am an apothecary, and live in Pall-mall, and am one of the examiners at Apothecaries' Hall. I was on duty there on the day named in the indictment. I heard the questions put by Mr. Este and others to the prisoner, who did not answer them.

Mr. Bacot stated that he was present when Mr. Hardy was struck. The blow appeared to have been struck with a blunt instrument. That now produced would inflict such a contusion. Has understood it to be called a life-preserver.

Mr. Justice Williams said he had seen such instruments exposed for sale in shop-windows; hence he feared they were very common.

The witness continued—There was a good deal of blood flowed from the wound, and Mr. Hardy was attended daily by him for about a fortnight. The wound was not in its nature dangerous in the first instance, but serious consequences might have arisen, and loss of life, had inflammation ensued.

By Mr. Phillips. — Medical students were in the habit of being out at all hours of the night, and might require an instrument for self-defence.

Mr. Phillips replied at great length in an energetic speech. The learned counsel argued against the possibility of the weapon which he then held in his hand—used by a powerful young man—having caused the wound. A child of twelve years of age would have caused, with such an instrument, a greater injury. But with a powerful arm, bones must have been fractured by a blow from such an instrument. Mr. Phillips contended that the blow was inflicted with the naked fist, used in a moment of passion.

Mr. Justice Williams. — Perhaps you had better have the surgeon recalled.

Mr. Phillips.—Then, my lord, I wish he may be called now.

Mr. Bacot, recalled, gave the same description of the wound as he had in his testimony in chief, stating his opinion to be that it could not have been produced by the knuckles of a man: it was just such a wound as he had seen produced hundreds of times by a spent ball.

Mr. Phillips resumed.—He was not sorry Mr. Bacot had been recalled, for it proved that he was not fully aware how the wound had been inflicted. He said it was like a gun-shot wound. Why, had not the jury, in street broils and fights, seen wounds exactly similar to the one described? In making the observation, he did not wish to disparage the professional reputation of Mr. Bacot, who was eminent for his long experience. The learned counsel appealed to the feelings of the jury to restore the young gentleman at the bar to the highly respectable family to which he belonged, and to acquit him of the grave charge made against him, and which he and his family so severely suffered under. That the prisoner had been guilty of a most imprudent and desperate assault, he (Mr. P.) would not deny or palliate, but he called upon the jury for an acquittal on the indictment before them. If their verdict should be favourable, yet would the unfortunate young gentleman be removed back to his dungeon to await another indictment, which, no doubt, would be preferred against him. The learned counsel concluded by observing, that there was no proof of malice as to the prisoner having the life-preserver in his possession; it was necessary even in the well-guarded metropolis, for medical students, who were out late at night, attending lectures, to have defensive weapons for their protection.

Mr. Bodkin called Dr. Seymour and several gentlemen in the medical profession, who gave the prisoner an excellent character for humanity and general good conduct.

Mr. Justice Williams summed up at length, with much perspicuity, stating the law, recapitulating the evidence, and commenting thereon.

The jury retired to consider their verdict, and on their return pronounced a verdict of *Not Guilty*.

The Court was moved to detain the prisoner to give time for an indictment of assault to be preferred against him.

The Judges assented, and ordered the prisoner to enter into his own recognisance of 200*l.*, and two sureties of 100*l.* each.

OPERATION OF THE ANATOMY ACT IN DUBLIN.

To the Editor of the Medical Gazette.

SIR,

ABOUT two years since a statement of the Dublin teachers of anatomy was published approving of the Anatomy Bill. It must gratify the author of that law to find that longer experience confirms their good opinion. It is effecting a slow but certain revolution in favour of the whole profession, and removing the odium which the outrages of resurrection-men attached to medical students. I inclose the resolutions of the teachers of the eight schools of Dublin, at their first meeting this year, and remain, sir,

Your obedient servant,
ARTHUR HASSALL.

Harcourt Place, Dublin,
Jan. 1837.

We the undersigned teachers of anatomy in the city of Dublin, consider ourselves called upon to state for the information of his Majesty's government that the most satisfactory results continue to follow the enactment of the Anatomy Bill. The supply of bodies is amply sufficient for the purposes of instruction; the practice of exhumation is rendered unnecessary, and if perpetrated at all, is only resorted to by persons seeking for teeth for the use of dentists.

For these most satisfactory consequences we consider ourselves indebted principally to the judicious arrangements, official firmness, and praiseworthy impartiality, of Sir James Murray, and we here venture to express a hope that the Chief Secretary will have the goodness to continue that support and countenance to his exertions which the government has hitherto been pleased to afford.

Arthur Jacob, Professor of Anatomy, Royal College of Surgeons.
Robert Harrison, Professor of Anatomy, Royal College of Surgeons.
John Nolan, Demonstrator of Anatomy, University of Dublin.
H. Carlisle, A.B. Demonstrator of Anatomy, University of Dublin.
William Hargrave, M.B. Lecturer on Anatomy and Surgery, Digges-street.
John Hart, M.D. Lecturer on Anatomy, &c. Park-street.
Andrew Ellis, Lecturer on Surgery, Peter-street.
G. T. Hayden, Lecturer on Anatomy and Surgery, Peter-street.
John H. Power, Lecturer on Anatomy and Physiology, Richmond Hospital.
John Denham, Lecturer on Anatomy, Marlborough-street.

Dublin, Jan. 1837.

ANOMALOUS CONDITION OF ASSISTANT SURGEONS IN THE NAVY.

To the Editor of the Medical Gazette.

SIR,

MAY I beg the favour of your inserting in your journal the inclosed letter to Sir William Burnett, which, by calling his attention publicly to the lamentable condition of the naval assistant surgeon, may lead to an investigation, and probably some improvement.

I remain, sir,
Your obedient servant,
B. M. W.

Clifton, January 1837.

SIR,—Considering the high and influential station you hold in the navy, being placed at the head of one of its most important offices, I conceive you to be the proper person to whom we must apply for the removal of certain evils existing in the department over which you preside. I cannot for a moment doubt that you feel due interest in the welfare of every officer, and that you will spare no efforts to render their condition equal to their expectations. The curriculum of studies issued of late years, and which demands from the candidate for the naval service more than any other institution in the kingdom, reflects the greatest credit upon those with whom it originated; and I refer to it with the more pride, as showing that in you, sir, we have a friend who, guided by the dictates of benevolence, has commenced an improvement calculated to be as beneficial to the medical officers themselves as to the naval service in general. But promising as it bids to be, and bright as the future may be expected from its salutary influence, I much fear the grand tendency of this improvement will be curtailed, or altogether frustrated, by the evils which exist in a quarter where its objects should be most promoted. In the endeavour to increase the extent of medical knowledge in the

navy, proper care seems not to have been taken to cherish its strength in the very cradle of its existence: the young candidate is informed that he is expected to be prepared in such and such branches of science; he observes that the amount of professional knowledge required is actually more than that demanded at the College of Surgeons, London, or the University of Edinburgh; and he very naturally concludes, that, after passing his examination at such a board, he will be expected to retain and increase it, and that every facility will be afforded him to do so; and few can tell how great his disappointment on finding the case otherwise. There can be no doubt that this period of his life, that which immediately succeeds his entrance into the navy, is the most important to him; for as this season is employed or neglected, he will become either a credit to himself and his profession, or an annoyance to both.

It has always been a subject of much regret to me, that the assistant-surgeon should be stationed with the midshipmen; their habits being necessarily so different to his own as to preclude the hope of all serious study. But independent of this, his accommodations are by no means what they should be. It is no apology to say that all who enter the navy must commence at the bottom and climb to the top, for true and justifiable as the observation is, yet the assistant-surgeon belongs to his own department; and though all naval officers collectively come under the same regulations, nevertheless each department has its peculiar exemptions. The medical man neither enters as a midshipman nor expects the treatment of one; but he enters as the member of an honourable profession, and claims that protection and respect which I trust it will ever deserve. If we followed the example set us in the army, the assistant-surgeon would at once be stationed in the ward-room; it is nothing more than a compliment he merits, and one which at least, out of decency, should be paid him. I think, sir, you must allow that this arrangement ought to have been made long ago, but now it becomes imperative, if, at least, the improvements which you have so wisely commenced are to effect any ultimate good; and I may here observe—and I do so with all respect—that whatever increase you make in the acquirements of candidates, and leave this evil unreclaimed, it will only be heaping sorrows on his head, and, instead of improving his condition, will increase the amount of his misery. Indeed, the idea of expecting better educated men than ordinary to enter this service, without any security for their future comfort, or the prosecution of their studies, seems too unreasonable to require comment.

It is for the remedy of this grievance that I have taken the liberty of addressing you, but I am sure you must see the necessity of a change, and the disastrous consequences which attend the present state of things, far better than I am able to point out.—I have the honour to be,

Your obedient servant,

B. M. W.

To Sir Wm. Burnett, M.D. &c &c.
Royal Navy.

MEDICO-BOTANICAL SOCIETY,

Wednesday, Jan. 11, 1837.

On the Corowatti.

A PAPER, by Dr. John Hancock, on the *Corowatti* of British Guiana, and its uses by the natives, was read. This plant belongs to the natural order Drymyrrhizæ of Decandolle, a large and very elegant herbaceous perennial growing in sandy soils, on the sides of hills and ravines. It is a species of Alpinia; but whether it be new, or the A. exaltata of Meyer, is uncertain; for great confusion prevails throughout this natural family.

The plant in question is bitterish, piquant, and sub-acrid: both the root, leaves, and fruit, are held in high esteem by the natives, for their medicinal properties, being with them a sort of panacea, as is the ginseng amongst the Chinese and Tartars, although the fruit is chiefly valued on account of its fine purple dye. A strong infusion of the bruised root, which is diaphoretic, diuretic, and in large doses emetic, is used in dropsies, rheumatism, dysentery, fevers, colic, pains, hooping cough, &c. In the latter disease, a convincing proof was adduced of its great efficacy in a large family, all of whom were speedily cured by taking an infusion and syrup of the root. The residence of this family was far distant from the settlement, in the woods of Pomeroon, and having no communication whatever with any one infected; this was regarded by the author as one evidence of the epidemic origin of the disease (hooping cough); or that it is propagated by a peculiar condition of the air, rather than by contagion. In dropsy, the natives both take the root internally,

and cover the parts affected with the leaves, and not unfrequently they envelope the whole body with them, which brings on a profuse perspiration, which often leaves them quite free from their complaint. In cases of poisoned wounds, the bruised root is laid on the part, and its decoction taken internally. Dr. Hancock remarked on our remedial practice in dysentery and hooping cough, and urged it as a matter of the utmost importance, to procure perspiration, especially by the use of external stimulants, the vapour bath and diaphoretic ptisans, saline aperients, and topical or general bleeding, as indicated by symptoms*. Such means, without incommoding the stomach, rouse the absorbents into action, and by exciting the exterior surface, incline the fluids thither, and thus by revulsion relieve internal congestions, with more certainty than by any other method, and often, indeed, when internal remedies alone would be utterly useless.

The paper concluded by remarking on the propriety of attending to the indigenous remedies of the country, the importance of which had been illustrated by the learned president, Earl Stanhope, in his discourses before the Society; and the author could not doubt that much advantage might be gained from the external application of large leaves of certain plants of this country, in a similar manner to those mentioned above, as, for instance, the Chelidonium majus, Rumex, Arum maculatum, &c., in aid of internal medicaments.

Wednesday, Jan. 25, 1837.

Analysis of Bitter Almonds.

Mr. Everitt, the Professor of Chemistry, stated some curious facts at which the French chemists have lately arrived, respecting the analysis of bitter almonds. The substance called amygdaline was obtained by macerating the bruised seeds in alcohol or æther; but it was proved that no hydrocyanic acid, or essential oil, was contained in them; and that these principles are *not educts*, but mere *products*, formed by water or by mastication: that benzoic acid is formed in the volatile oil by its union with oxygen, and the bitter principle is developed only by attracting azote or nitrogen.

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* The same practice he has found to be most beneficial in the present epidemic.

ROYAL INSTITUTION.

Friday, Jan. 27, 1837.

Processes of Embossing.

Mr. Brande this evening gave an interesting lecture on the various processes at present employed in the embossing of paper, cloth, leather, &c. Many beautiful specimens were exhibited, and some were actually produced in presence of the audience, by expert workmen who were in attendance. The ingenious methods of making splendid metallic papers were demonstrated, and the whole art of manufacturing gold, silver, and jewels, for theatrical use, was laid open. To Messrs. De la Rue the lecturer acknowledged his obligations, for the opportunities of illustration thus afforded him from their magnificent establishment.

PRESENTATION OF PLATE TO SIR C. BELL.

A letter has been received by a member of the Committee of Management, from Sir Charles Bell, dated Edinburgh, December 31, 1836, part of which we have been requested to publish:—

"My dear sir,—I have to-day received the most gratifying proof of esteem from my friends in London. The inscription on the vase touches me sensibly, and expresses all that I have coveted during my toilsome life in the metropolis.

"Convey to the subscribers my lively sense of this mark of their remembrance. You cannot use words sufficient to express the importance I attach to this new proof of their esteem.—I am, my dear sir,

"With all sincerity, yours,

(Signed) "Charles Bell.

"*To Dr. Locock.*"

UNIVERSITY COLLEGE AND NORTH LONDON HOSPITAL.

DR. A. T. THOMSON.

[The following communication reached us at a very late hour in the afternoon of

Friday. We have inserted it at great inconvenience. Of the circumstances of the charge against Dr. Thomson we repeat that we know nothing; we merely published the authenticated statement of a pupil of the North London Hospital.—Ed. Gaz.]

We, the undersigned students at the London University, having observed an article in the last number of the Medical Gazette, which attempts to impute a want of attention on the part of our esteemed professor, Dr. A. T. Thomson, to the duties of his station, feel ourselves called upon to express, most distinctly, our firm conviction of the utter untruth of such imputation, and thankfully to acknowledge the advantages we have derived from the constant and unwearying attention bestowed by the Professor, in promoting the instruction of the students as well at the hospital as in the class-room;—an instruction enforced not less by the talents of the Doctor than by the urbane and gentlemanly manner in which that instruction is at all times conveyed.

[Here follow 112 signatures.]

NEW MEDICAL WORKS.

A Clinical Treatise on the Endemic Fevers of the West Indies. By W. J. Evans. 8vo. 9s.

Lectures on Local Nervous Affections. By Sir B. C. Brodie. 8vo. 4s.

Illustrations of the Comparative Anatomy of the Nervous System. By Joseph Swan. 4to Part II. 7s.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN JANUARY.

George Daniel, Manchester.
James B. Melhuish, Hoxton.
John Baker, A.
Wm. B. Hart, London.
Henry P. Palmer, Winterborn.
John Ashford, London.
Barnard Garnham, Lewes.
Wm. Rickitt, Boston.
Charles Bruorton, Salisbury.
Wm. F. Barker, North Wych.
John Small, London.
Augustus Slight, Portsmouth.
Robert H. M'Keand, Manchester.
Wm. S. Taylor, Leeds.
Digory W. Sargent, Launceston.
Arthur O. B. Jones, Bromley, Kent.
Henry W. Livett, Trowbridge, Wilts.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

February 2, 1837.

John Sutton, Yoxall, near Lichfield, Staffordshire.
William Denne, Canterbury, Kent.
John Jones, Gravesend.
Peter Hudson, Warham, Norfolk.
Benjamin Carrington, Walton on Naze, Essex.
William Clapham Meates.
William Gale.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Jan.* 31, 1837.

Abscess	2	Heart, diseased	7
Age and Debility	121	Hernia	1
Apoplexy	6	Hooping Cough	34
Asthma	97	Inflammation	81
Cancer	3	Bowels & Stomach	3
Childbirth	9	Brain	4
Consumption	127	Lungs and Pleura	51
Constipation of the Bowels	1	Influenza	99
Convulsions	56	Liver, diseased	8
Croup	2	Measles	8
Dentition or Teething	13	Mortification	7
Diarrhœa	1	Paralysis	6
Dropsy	23	Rheumatism	2
Dropsy in the Brain	10	Small-pox	7
Dropsy on the Chest	4	Sore Throat and Quinsey	2
Epilepsy	2	Spasms	5
Erysipelas	2	Thrush	1
Fever	12	Tumor	1
Fever, Scarlet	5	Unknown Causes	28
Gout	1		
Hæmorrhage	2	Casualties	6

Decrease of Burials, as compared with the preceding week . . 11

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Jan. 1837.	Thermometer.	Barometer.
Thursday . 26	from 39 to 44	29·55 to 29 60
Friday . . 27	34 39	29 67 29·75
Saturday . 28	31 37	29 79 29 81
Sunday . . 29	28 35	29·70 29 69
Monday . . 30	25 42	29·70 29 72
Tuesday . . 31	33 48	29·82 29 89
Feb.		
Wednesday 1	33 44	29·89 30.06

Winds N.E. and S.E.

Cloudy, with frequent showers of rain. A little snow on the 28th and 29th ult.

Rain fallen, ·8625 of an inch.

Charles Henry Adams.

Wilson & Son, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 11, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XX.

Infanticide. *Causes of its frequency in civilized communities—Among ancient nations — Prevalence in the East — In the western world; but no where among savage tribes. Legal positions and distinctions respecting child-murder—Born alive; various decisions as to the meaning of the phrase—Law of concealment of the birth — Objects of medico-legal inquiry:* 1. *Was the infant born alive?—Obvious signs of survival of birth—Certain sign of still birth—Question of respiration—External and internal appearances. Proofs from the state of the lungs —Their colour, volume, consistence, absolute weight, and specific gravity. Ploucquet's static lung-test—Its value, as modified by subsequent and recent observers.*

We now proceed to the consideration of a subject which is usually held to be as intricate as it is important in medico-legal science—namely, that of

INFANTICIDE.

Infanticide, or child-murder, implying in its ordinary acceptation the wilful and violent death of the new-born child, is a crime which, from its heinousness, its frequency, and the difficulty that often attends its proofs, demands the most earnest attention of the medical jurist.

Causes of Infanticide in civilized communities.—It is worth remarking, that infanticide has been observed to be most frequent in states or communities which are said to enjoy the blessings of civilization; and the causes which lead to it are perhaps not difficult to be assigned. "To parents," says Professor Beckmann, "who are just able by incessant labour to procure those things indispensably necessary to support life, the birth of every child increases the fear of starving, or of being reduced to beggary. Those who have secured to them a scanty subsistence, but who live in servitude, wish to the new-born child a speedy dissolution, before it can know that it has had the misfortune of being brought into the world, in order that they may not bequeath to it their poverty. A young female, who has acquired by education the most delicate sense of honour and shame, finds herself, on the birth of an illegitimate child, exposed at once to the utmost disgrace and contempt. Her misfortune, though viewed with an eye of pity by the compassionate, excites the hatred of the greater part of her relations and friends, by whom she was before loved and respected, and who endeavoured to render her happy; and often amidst the most poignant feelings, and an agitation bordering on madness, she sees no other means of saving her honour than the total concealment of her error by destroying the child; a resolution which, notwithstanding the vigilance of the laws, is too often attended with success. A young woman who at this moment finds herself suddenly despised and neglected by her admirer, who gained her affections by the most powerful of all means, love and confidence, and obtained from her what she cannot recover, is often induced, in a fit of despair, to vent her fury on the consequences of her seduction—the child of her seducer."

Its frequency in ancient times.—Previous to the Christian æra, and until the morals of mankind began to be improved under the influence of Christianity, the practice of infanticide prevailed to a monstrous extent. Among the Greeks it was not only tolerated, but in some states enforced. The Romans,

however, seem to have surpassed all other nations in this kind of cruelty; nor was it till a comparatively late period of the empire that the vice was eradicated by the terrors of capital punishment. In the Justinian code, the crime of murder was imputed to the father who strangled, starved, or abandoned his new-born infant, or who exposed him in a public place, "to find that mercy which he himself had denied." "But," as Gibbon says, "if the father could subdue his own feelings, he might escape, though not the censure, at least the chastisement, of the laws; and the Roman empire was stained with the blood of infants, till such murders were included by Valentinian and his colleagues in the letter and spirit of the Cornelian law."

Tacitus mentions it as a circumstance deviating from the Roman manners, that the old Germans considered child-murder as a crime; and where he speaks of the peculiarities of the Jews, he does not fail to relate the same thing of them,—although, by the way, it is curious that there is no law in the Pentateuch whereby child-murder is prohibited.

Prevalence in the East.—In certain Eastern countries infanticide is still very prevalent. In Hindostan, for example, parents sacrifice their children to the Ganges, or to any power whom they wish to propitiate; but the practice has been much restrained by the interference of the English government, particularly under the auspices of the Marquis Wellesley. There is, however, a race of Rajpoots in Western India, who are said to have been in the habit of immolating *all* their female children; nor have the benevolent exertions of the English residents and missionaries in any considerable degree succeeded in suppressing the cruelty. The motive is supposed to be a religious or superstitious one. But even among the better and more enlightened classes of Hindoos, and where the parents have no poverty to plead, the practice of destroying newly-born children, particularly females, prevails to a great extent: it is persevered in apparently through a calculating spirit of domestic policy; and the unfeeling manner in which the death-sentence is pronounced by the father, when he is informed of the birth of a daughter, shows at once the familiarity of the custom and the levity with which it is regarded. "Give it milk!" is the fatal mandate; whereupon the child is drowned in a pail of milk, or, as others report, a milk vessel is forced over the infant's head, so as to produce suffocation. Other methods of effecting the child's death are mentioned by Buchanan, in his Christian Researches. As soon as it is found that the infant is a female, a piece of opium is put into its mouth; or the umbilical cord is drawn over its face, which, by preventing respiration, destroys it.

The Chinese also are notorious for the numbers of children, chiefly female, which they destroy, or expose. In Pekin alone, it is said that several thousands annually are thus got rid of.

In Ceylon it is rare to find more than one daughter in any family, and the last general census of the island, in 1821, shows that the number of males exceeds that of females by 20,000. The difficulty of marrying their daughters, and giving them marriage portions, is generally alleged as an excuse for destroying them.

In the western world.—Among the old American nations—the Peruvians and Mexicans, for example, the sacrificing of children is said to have been a common custom; and travellers record the names of several tribes belonging to the southern continent, such as the Abipones and Araucanians, who were in the habit of murdering their infants. But, as Dr. John Beck observes, "to the honour of our North American Indians, it deserves to be mentioned that they are not known to be guilty of this horrid crime. Mr. Heckewelder, in his interesting account of the Indians who inhabited Pensylvania and the neighbouring states, says, 'I have never heard of any nation or tribe of Indians who destroyed their children, when distorted or deformed, whether they were born so or come to be so afterwards.'"

This, however, is only in accordance with the observation which has already been made—that it is the artificial restraints of society, and the difficulties apprehended in rearing offspring according to the usages of civilized communities, that lead to the perversion of one of the most natural of our instincts: for in the savage state, parents require no more for themselves and their children than they can easily obtain, and are thus exempt from those influences which would, in other circumstances, interfere with the kindliest feelings of nature.

Legal positions and distinctions respecting child murder.—The term child-murder has sometimes been applied in an extended sense to fatal injuries inflicted by the mother, or other persons, on the fœtus *in utero*. It appears to amount, as I mentioned in a former lecture, to homicide, or manslaughter at least, if, on the subsequent birth of the child, those injuries prove to be of such a nature as to cause its death. According to Lord Coke, if the child be born alive, and afterwards die in consequence of injuries wilfully inflicted on it while in the womb, it is murder. In a case where a midwife injured a

child's head before it was born, she was found guilty of manslaughter; the child having been born alive, but having died soon after of the injury.

But the more ordinary charge of infanticide occurs in cases where the mother is supposed to be guilty of the murder of her child after it is born.

It has been decided, that in order to substantiate this charge, "the whole body of the child must have been brought into the world prior to the extinction of life." When this is left doubtful, the mother will most probably be acquitted.

It has also been decided, that the child cannot be considered as born alive until it has had "an independent circulation." On which decision a question might arise, whether, if the umbilical cord were not severed, there could be infanticide? And hence also, though it should be proved that the child breathed, that fact is not sufficient to constitute the killing child-murder; for the child might have breathed before it was born (wholly), or had an independent circulation.

The fact of respiration is commonly held to be proof of live birth. But with respect to the evidence of breathing, it has sometimes been considered not sufficient to prove that a child has breathed, when circumstances leave it doubtful whether the breathing was not merely *during* the birth, and before the establishment of an independent circulation.

According to the decision in an important case, Rex *v.* Poulten, (5 Car. and Payne, 329), "Being born must mean that the whole body is brought into the world, and it is not sufficient that the child respires in the progress of birth." Mere proof of having breathed is not enough: for, according to the evidence in this case, First, it may happen that the child is born as far as the head is concerned, and breathes, but death takes place before delivery is complete; secondly, death might have occurred when the child was partly born, if no medical man was present to assist delivery; and thirdly, it may be impossible to say when the child respired; the breathing may have occurred during parturition.

On the other hand, infanticide may be committed after birth, though before the child has breathed. The circumstance of its being proved that a child has never breathed is not conclusive that the mother has not been guilty of infanticide.

In the trial Rex *v.* Brain (6 Carrington and Payne, 349) it was decided that proof of breathing was not essential, the child having been wholly born, and alive; but the jury must be satisfied that the child was wholly born. Two surgeons proved that the child had never breathed; but it was urged that many children are born alive, yet do not breathe for some time after birth.

However, upon all trials for infanticide by a mother, the question whether a child has breathed or not is a material topic of inquiry. If it has not breathed, acquittal is almost sure to follow; it is, therefore, very important, in order to support a prosecution, to establish the fact that the child has breathed; and the medical witnesses both for the prosecution and defence ought to be able to speak very minutely as to the breathing.

Generally the point of discussion is, whether a live child, (that is, as usually understood in criminal cases, one that has breathed) has been killed or not. But sometimes it is reduced to this, whether supposing a live child has been killed, it has been killed by pure accident.

I believe there is no case in the annals of English jurisprudence, where, upon a trial for infanticide, the question has turned on the point, whether the child having been killed, the death was caused by the gross negligence of the mother; nor is there an instance that I am aware of, where the mother has, through any omission, been found guilty of manslaughter. The charge has either been murder, or concealment, or nothing.

The law of concealment of the birth is so closely connected with our present subject, that it may without impropriety be introduced here. By the 14th section of the Lansdowne Act, (9 Geo. IV., c. 31) "If any woman tried for the murder of her child shall be acquitted thereof, it shall be lawful for the jury by whose verdict she shall be acquitted, to find, in case it shall so appear in evidence, that she was delivered of a child, and that she did by secret burying, or otherwise disposing of the dead body of such child, endeavour to conceal the birth thereof, and therefore the court may pass such sentence as if she had been convicted upon an indictment for the concealment of the birth."

It is added, that when a prisoner is tried for the concealment, "it shall not be necessary to prove whether the child died before, at, or after the birth." Hence, on an indictment for this crime, it must appear that the mother was delivered of a child, and that the child was dead; though whether it died *before*, *at*, or *after* the birth, need not be proved.

The special mention here of proof as to *when* the child died, seems distinctly to imply that such proof is essential on the capital charge of infanticide.

One other circumstance connected with indictments for concealment of the birth is worth noticing. No costs are allowable on such trials. In consequence of which,

as Sir Gregory Lewin observes, in his concise and excellent Northern Circuit Reports, "it is sometimes the practice to indict the party for murder, though it is well known the evidence will not support the charge; and by this stratagem the prosecutor contrives to get the usual costs allowed for a felony prosecution, notwithstanding the jury negative the murder, and find only the concealment." But the impropriety and cruelty of this mode of proceeding have been severely censured from the bench, and the costs refused.

Objects of medico-legal inquiry.—From the preceding summary of the legal distinctions respecting infanticide, we may gather that the usual defence set up in all such cases is, that the child did not live—that it was born dead. And this, in fact, is the general plea advanced for the prisoner; the *onus probandi* of live birth resting with the prosecution. Unless it can be proved that the child actually survived birth, and died in consequence of certain violence inflicted on it, the charge of murder cannot be supported.

Whoever attempts to reconcile the decisions on the law books as to the amount of proof requisite in cases of infanticide, will find himself not a little bewildered; the evidence of live birth itself, or what is to be considered as such, is far from being precisely determined; and the bench and bar have here, as in many other points of forensic medicine, a wide discretion secured to them.

It may be stated, however, in general, that the main objects of inquiry in cases of infanticide are twofold:—1. Whether or not the infant was born alive; and 2. Whether death was occasioned by natural causes or the infliction of violence.

1. *Was the Infant born alive?*

Following this simple arrangement of the subject, we shall proceed to consider, in the first place, the proofs of live and still birth in criminal cases; or, to describe our purpose more in accordance with the spirit, if not the letter, of the law, we shall inquire what grounds there may be for concluding that the child died *before*, *at*, or *after* delivery.

The appearances presented by the body afford us the best means of forming a just conclusion.

Question of maturity.—One of the first points that deserve our notice is the age of the fœtus in respect to intra-uterine life. Is it a mature infant or immature? For in proportion to its immaturity may we presume that there was the less chance of its being born alive.

I have already described the characters derived both from the external and internal inspection of the body of the fœtus, by which we can arrive at certain conclusions respecting its age from conception *.

Sure signs of having survived birth.—But it may happen that there shall be certain appearances observable which shall decide at once the question of survival of birth. For example, certain conditions of the umbilical cord, and of the cuticle. These have been noticed in a former lecture, in reference to the age of the new-born child; but it may not be improper to repeat the description of them here, however briefly.

Should it appear that the umbilical cord has sloughed off,—not from putrefaction,—not only was the child born alive, but it must have lived four or five days. If the cord has not only sloughed off, but the navel has become cicatrized, the infant cannot exactly be considered as *new-born*, for it must have lived about ten days. As to the cuticle, the process of *desquamation* begins to take place when the child is a day old. If, then, desquamation of the cuticle (which must not be confounded with peeling off of the skin from putridity) be observed, the infant certainly came into the world alive, and continued to live above a day at least. In either of these cases, the labour of the medical jurist is materially abridged; he need not apply the tests, hereafter to be mentioned, for live or still birth, but merely confine himself to the question, whether the death of the infant was natural or owing to violence.

Another obvious case of the same kind would be, when, upon examining the stomach, it should prove to contain milk or other food partially digested. Such cases have happened: the body of a child has been found, evidently dead for some time: before applying any other test, the stomach has been opened, and, in consequence of the appearances there observed, further inquiry has been deemed unnecessary—the fact of survival of the birth being indubitable.

Should the bowels be found destitute of meconium, this also would denote that the child had lived for a time. Other distinctive characters, chiefly anatomical, may here be omitted, as we shall have to notice them farther on.

Obvious sign of still birth. — Previously to entering on the important question, whether a new-born infant, found dead, had ever respired or not, it is to be observed, that there are some cases in which it is obvious and proper to presume that the infant *could* not have been born alive—in fact, that it must have died, perhaps some time, before birth. There is one appearance which serves to remove all doubt, namely, that of *uterine putrefaction*.

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* Lecture III., p. 66, *et sqq.*

When a child dies in the womb, and is expelled, as it generally is, after some days, it is found to have undergone changes as striking and as characteristic as if it had been exposed to the open air. There is a looseness and flaccidity of all the structures; the bones, especially those of the head, have no firmness in their union with one another; they yield with their own weight, and that of the contents of the skull. The skin is decomposed, the epidermis peeling off, and when newly removed, leaving the integuments beneath of a bright reddish colour. The belly is generally of a brownish hue, without any mixture of green. The umbilical cord is wholly relaxed, untwisted, and full of a brownish liquor. Beneath the scalp, also, will generally be found an effusion of serum, which has been compared to a thickish raspberry vinegar. It is said that in some instances the dead fœtus, ere it has been expelled from the uterus, has been converted into *adipocire*.

But all these appearances will be better appreciated by an experienced eye, or by a person who has even only once or twice observed them, than from any mere description. The preceding detail applies to the case of the dead infant not being expelled for several days; but suppose the infant born on the same day, or the day after, it has died—what then becomes of our indubitable sign? It does not hold good: we can then only have recourse to the ordinary tests of live or still birth.

Has the Infant respired?

This, after all, is usually the main question to be determined, where the inquiry is, in *criminal* cases, whether the infant was born alive. In *civil* cases, as I have already observed, where tenancy by the courtesy of England is at issue, it is sufficient proof of live birth that the infant has exhibited any sign of voluntary motion; nay, mere muscular irritability seems, in one instance, to have been held decisive. The courtesy of Scotland requires proof that the child has *cried*.

The proofs of respiration are founded on the phenomena which are observed to take place when uterine is changed for extra-uterine life. An alteration occurs in the structure and functions of several parts of the body; but the lungs, the heart, and the liver, are the viscera chiefly affected.

Before proceeding to an internal examination, *the external condition of the chest* ought to be noted. In a child which has never breathed, this part of the body is narrow and flattish; where respiration has taken place, on the contrary, the chest is ample and arched.

Internal Inspection of the new-born Child.

Chaussier, in his *Recueil de Mémoires*, gives some excellent remarks on the opening of bodies, to which I shall have to refer more particularly hereafter. The chest he recommends in all cases, whether adult or infantine, to be laid open as widely as possible, so as to display its contents fully. In the new-born child, the ribs can be most conveniently divided with a pair of scissars, where a saw would have to be employed in the adult. As it is desirable, in many instances, to obtain a view of the contents of both abdomen and thorax at once, the conical-shaped sections of the sides may be continued down to the pubes, so that the whole surface of the trunk may be removed in one piece, in the form of an elliptical flap. In detaching this covering from the cavities, its connexions with the diaphragm must be separated with the scalpel; after which, the umbilical ligament of the liver is to be carefully cut through. The viscera are then freely exposed. Those of the thorax at present demand our attention.

With respect to the state of the lungs, the principal points to be attended to are, 1st, their colour; 2dly, their volume; 3dly, their consistence; 4thly, their absolute weight; and 5thly, their specific gravity.

1. *Colour of the lungs.*—The colour of the lungs of infants born dead is a dark purplish or chocolate hue: some call it a liver colour; and it certainly does correspond with the tints of the adult liver. In a still-born child, also, the lungs are generally found to resemble the thymus in colour; and though the latter is sometimes more pale than the former, yet the comparison is worth attending to: for as the thymus remains unaltered on the occurrence of respiration, or artificial inflation, it affords a sort of standard whereby to judge whether either of these processes has taken place or not. The introduction of air into the lungs completely alters their colour: they become a florid red on inflating them by a tube introduced into the trachea, and natural respiration gives them a bright red or rosy hue. Very frequently, the exact portions of the lungs into which air has been admitted can be easily distinguished from the other parts, by their difference of colour. But it must be kept in mind, that if the lungs be diseased, or gorged with blood, the appearances just mentioned may be greatly modified. On those diseased conditions which may lead to fallacy, I shall subsequently have some remarks to offer.

2. *Volume of the lungs.*—The cavity of the chest of a still-born child presents a very different appearance from that of a child which has been born alive. Where the

lungs have never received air, they appear to occupy but a comparatively small portion of the chest; the pericardium and thymus hold a prominent place in front, while the lungs are placed altogether laterally and posteriorly. This will be better understood from the following figure.

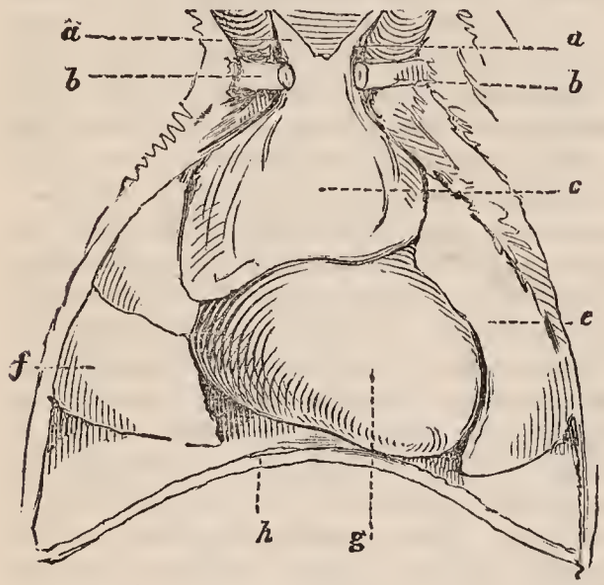

Fig. 25.

In this figure, *a* and *a* represent the horns of the thymus; *b b*, the clavicles, with their anterior portions removed; *c*, the body of the thymus; *e f*, the lungs; *h*, the diaphragm; and *g*, the pericardium.

On the other hand, the change effected in the volume and situation of the lungs, by the admission of air, may be readily comprehended from this sketch.

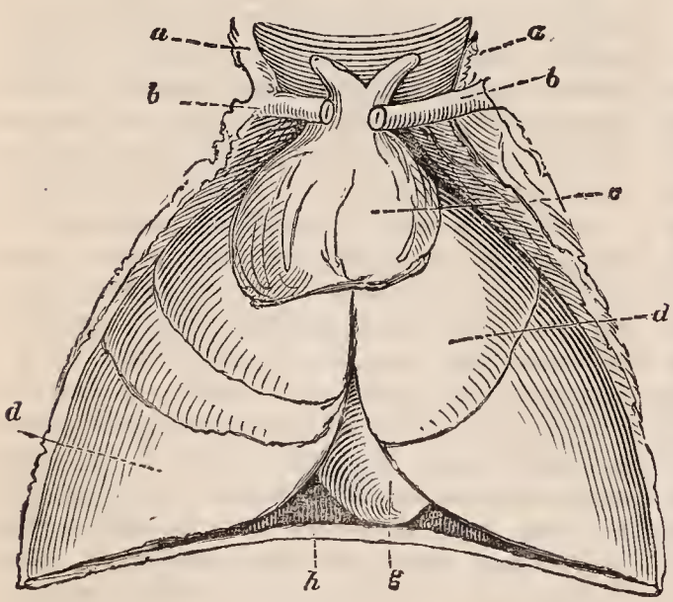

Fig. 26.

It will be seen that the pericardium is here nearly covered; the diaphragm is less convex; and the lungs (*d d*), in every direction, more voluminous, and largely extending over the latter.

Let it be recollected, however, that in forming a judgment respecting respiration from the volume of the lungs, as well as from their colour, disease may materially interfere in preventing a diagnosis. Thus the lungs of still-born children may be filled with a serous fluid, which considerably increases their volume, and might lead an inexpert observer to fancy, without further examination, that they were filled with air. In such cases our acquaintance with pathology must come to our aid.

3. *Consistence of the lungs.*—Lungs which have been inflated with air, naturally or artificially, acquire a spongy and crepitous character; they feel soft and light; their edges are rounded off; they appear vesicular, and frothy fluid may be squeezed out of them. Putrefaction or emphysema will also render their surface vesicular; but the vesicles, in this case, are large and irregular, and confined to the surface; being contained, not in the air-cells, but in the cellular substance beneath the pleural lining: and, moreover, the gaseous product of putrefaction, or emphysema, may be totally expelled by pressure, while atmospheric air in the air-cells cannot. The lungs of the still-born are dense, and their edges sharp (particularly the left upper and right middle lobes), and nothing can render them of the consistence and appearance just now described but natural breathing or artificial inflation. If there be reason to know that the latter process has not been had recourse to, the soft spongy feel, the vesicular character, and the discharge of air-bubbles by pressure under water, will strongly indicate that the child has breathed.

4. *Absolute weight of the lungs.*—When respiration begins, it is not merely air that enters the lungs, another fluid gains admittance also—blood which is propelled by the action of the heart. This, by the way, is a circumstance which does not attend artificial inflation, unless it be practised ere the motion of the heart has ceased. But confining ourselves to the effect of the admission of blood into the lungs of the live-born infant, it obviously increases the weight of those organs—in many cases it is found to double it; that is to say, if the lungs, previous to respiration, weighed an ounce (which is about the average weight in the still-born), they weigh, after breathing is established, two ounces. The reason of this change is obvious: the heart of the live-born infant must be always more or less active, and, immediately on the commencement of the new process of inspiring and expiring air, will propel blood into the vessels of the lungs, which had hitherto been unexpanded: the result is, that the respiratory organs are increased in weight (by that of the blood admitted) as well as in volume. But the case is different with the lungs of

the still-born. If, upon the artificial introduction of air into them, their vessels receive *any* blood, they do so only passively: there is no action of the heart to supply them, and consequently their weight is not materially, if at all, increased. Ploucquet, of Tubingen, thought that this change occurred so generally, that it would afford a good test of the fact, whether respiration had or had not taken place. He accordingly, about the year 1777, founded upon it and proposed what is commonly called

The Static Lung Test.

Ploucquet's device was to compare the absolute weight of the lungs, with that of the body, of the infant; and in doing this, he found that, in the case of still-born children, the lungs were no more than about one-seventieth of the weight of the body, while, in the live-born, they weighed one-thirty-fifth. From this he inferred that respiration doubled their weight.

But his inference was deduced from too few facts to warrant its general acceptance as a truth. Other observers and experimentalists came after him, and found that his conclusion was not very correct. Schmidt, at Vienna, and Chaussier, at Paris, entered into a special scrutiny of the nature of the true ratio, and the result of their researches (for they correspond pretty closely) has been, that, in the still-born, the average weight of the lungs is about one-fiftieth of the weight of the body, while, in the live-born, it is the one-fortieth. M. Devergie, who has still more recently inquired into the subject, thinks that the averages would be more exactly stated at $\frac{1}{51}$ and $\frac{1}{38}$.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture V.

Treatment of Typhus fever—Tympanites often the consequence of inattention to diet, or to overdosing with purgatives—Thirst in fever frequently dependent on the state of some internal organ—Blisters, employed as stimulants or evacuants, excite the vital action of the capillaries—An important remedy where cerebral affection is apprehended—Signs of approaching cerebral symptoms—Tartar emetic solution, and ointment—The latter used with success in some desperate cases.

Before I proceed to speak of the diet and remedies to be employed in the treatment of typhus, allow me to make a few observations. There is a patient at present in the fever ward, whose case shows the necessity of strict attention and incessant watchfulness on the part of those who have the management of bad cases of fever. A man who has been labouring under delirium, with symptoms of cerebral excitement and congestion, was ordered the tartar emetic solution, with the view of reducing the increased vascular action; but on inquiry this morning, we find that he has taken no medicine, and that his symptoms have been allowed to go on unchecked for twenty-four hours. He refused to take his medicine, and the nurse very improperly neglected to report the circumstances of the case, in order that proper steps might be taken to remedy so dangerous an omission. Thus a whole day has been lost at a most critical and important period of fever. There can be no excuse for such negligence as this, for it could be easily remedied. Patients in this state have always more or less thirst, and a spoonful of the tartar emetic solution could be mixed with whey or cold water, and administered in this way without his knowledge, or if he refused to drink any fluid, it might be given in the form of enema. There is no excuse, therefore, for such negligence; and when you recollect the state that such patients are in—their nervous excitement, incessant raving, agitation, struggling, and sleeplessness—you will be able to appreciate the dangerous, and even fatal, consequences that may arise from culpable neglect of this kind.

At our last meeting I spoke of the use of food and drink, and laid before you my views of the most appropriate articles of diet in the various stages of fever. I told you that I attributed much importance to the use of a proper regimen, and that I looked upon the observance of this principle as a main cause of success in the treatment of typhus. I think it is chiefly owing to our care in this respect, that so few of our patients have tympanites. Now and then we have cases of fever with tympanites and diarrhœa, but in the majority of instances, these are persons who have been under treatment before admission, and who have been too much purged. The use of drastic purgatives in the early and middle stages of typhus, is one of the most fertile sources of subsequent evil, and there are few evils of greater magnitude than tympanites with diarrhœa, and gastro-enteric inflammation, particularly in the latter stage of fever. Now, if you inquire into the history of the cases in which these symptoms are most distinctly marked, you will find that in at least two-thirds, powerful cathartics have been

employed, not once, but repeatedly, in the commencement of the disease. Almost all cases, in which calomel and colocynth, or aloes, followed by black draught, have been liberally used in the commencement, become tympanitic, frequently at a very early period. The same mischief, but in a less degree, is apt to occur where a system of strict abstinence has been enforced, and continued undeviatingly for a considerable length of time. Want of food, even in the healthy state of the system, is apt to produce flatulence, weakness, and distention of stomach, and in many instances gives rise to very serious forms of gastro-intestinal irritation. The *diète absolue* is very apt to produce the same effect in fever. Even the abuse of drinks of the simplest and most innocent description, is apt to produce flatulence, distension, and a tendency to tympanites. Hence the value of the rule which I laid down in a former lecture, viz. to allow the patient only small portions at a time, and to order him to swallow them slowly. The abuse of the ordinary drinks, as common water, whey, barley-water, soda and Selzer waters, and effervescing draughts, is a frequent source of tympanitic swelling in fever. In this hospital we seldom prescribe effervescing draughts, and never give them in the *ad libitum* quantity which some persons recommend. Thirst can be sufficiently assuaged by the use of whey, or common water, acidulated with currant jelly or raspberry vinegar, given in small portions, and at certain intervals. Sometimes you will succeed effectually in controlling feverish thirst by the use of a very light infusion of cascarilla, acidulated with a small quantity of muriatic acid. I have seen this employed with success by Mr. Kirby, and I have often prescribed it myself with the best effects. Very often you will find that a small quantity of some light bitter, slightly acidulated, will appease the morbid thirst of fever more effectually, and for a much longer period, than large draughts of water, or any of the fluids usually employed for the same purpose. You should always bear in mind, that thirst in fever does not exclusively depend on a dry or parched state of the mouth or fauces, but lies much deeper in the system, and has its origin in some peculiar derangement of the nerves, most probably of those belonging to the ganglionic system. In going through a fever ward, you will meet with numerous illustrations of the truth of this position; for you will find one man with a moist tongue and fauces, and yet labouring under insatiable thirst, while you will observe another with parched tongue and throat, and yet without any desire whatever for fluids, or any choice as to their temperature. We had two examples of this in the fever ward during the past week. One patient with a moist tongue was incessantly calling for drink, while another man, who had his tongue almost perfectly dry, exhibited a very remarkable indifference to fluids.

There is one curious circumstance connected with the sensation of thirst in inflammatory diseases, which deserves attention. I lately attended a fatal case of metritis after delivery, in consultation with Mr. Hayden and Dr. Ireland. These gentlemen pointed out to me the singular fact, that the patient's thirst was instantly increased to an intolerable degree, by pressure applied to the womb. I merely notice the fact here as being extremely curious, leaving the explanation of it to those who are more conversant with such investigations.

Having said so much of food and drink in fever, I come now to speak of external and internal remedies, and first of blisters. Blisters are employed in a variety of diseases, but are followed by very different physiological effects, and capable of serving very different purposes, according to their mode of application. In fever they are generally employed either as stimulants, or as evacuants and derivatives. As stimulants, they may be used with the intention of rousing the depressed energies of the system in general, by their action on the nervous and circulating systems, or of stimulating the torpid functions of some particular part or organ. With this object in view, they are applied as flying blisters — that is to say, for a space of time not exceeding two or three hours, and solely with the intention of producing a stimulant effect. You have seen some cases of fever in our wards, in which the powers of life were greatly depressed, the extremities cool, the action of the heart feeble, the pulse weak, respiration short and imperfectly performed, and a tendency to faintness and sinking; and you have observed that in such cases we derived great benefit from the application of flying blisters over the region of the heart, the epigastrium, chest, and inside of the legs and thighs. We applied our blisters in these situations, left them on for two or three hours, and then removed them; and you have seen them, when employed in this way, succeed in rousing the vital energies, the depressed action of the heart and capillary system, and the flagging state of the respiratory function, as shewn by the increased strength of the pulse, the more general diffusion of heat, and the renewed play of the various functions.

In such cases, where the stimulant effect alone is required, it would be wrong

to leave the blisters on longer than two or three hours; it will be quite sufficient if they prove merely rubefacient, or, at most, vesicate so slightly as to give to the blistered surface the appearance of a miliary eruption. Here you have all the stimulant effects of blistering, but not followed by their debilitating consequences. You are aware that blisters applied in the ordinary way have a twofold effect; they first rouse, and then depress; acting primarily as stimulants, and secondarily as evacuants. They first act as stimulants, producing pain, heat, and redness of the part; after a few hours these symptoms diminish, and are followed by an effusion of serum—in fact, a quantity of white blood is abstracted from the cutaneous capillaries, and in this way an evacuation is produced, calculated to diminish any accidental congestion in neighbouring parts. The capillaries, by means of their increased action, draw a quantity of white blood to the part; and in saying this, I think I am only using a perfectly physiological expression; for the quantity of circulating fluid in any part of the body must depend on the vital action of the capillary vessels of that part. It is to the peculiar state of the capillary vessels that the quantity of blood in any part is to be referred, and not to the force or frequency of the heart's action. It is by means of changes produced in them that the phenomena of active congestion and inflammation are produced: the capillaries of the affected part enlarge, increase in number, and multiply, and those which were invisible become visible. These phenomena have been falsely attributed by Hastings and others to debility and impaired action of the capillaries.

Enlargement or distension of the capillary vessels, whether the result of active local congestion or inflammation, is quite a different process, and bears a very close analogy to the enlargement of the anastomosing arteries of a limb in which the principal vessel has been tied. The afflux of blood, and the vascular distension, are not the consequences of debility or of relaxation, but of an actual increase of vital action. In the enlargement of the anastomosing arteries which takes place in cases of collateral circulation, the increase of size is not confined to the arteries connected with the main trunk; it commences simultaneously in the more distant set of branches, beginning in the smaller ones, and then gradually extending to the larger. This is a proof that the enlargement of the vessels depends solely on a vital action inherent in themselves, and is not the result of a mere passive distension, or of an increased determination of blood to the part, produced by the action of the heart.

Dr. Houston, in a very important paper on the circulation in a monstrous fœtus, without head or brain, published in the last number of the Dublin Medical Journal, has proved almost to a demonstration, that, in the case referred to, the circulation in the placenta could not be carried on, unless by the vital attractive power of the capillaries. It is owing to this power that vascular tumors bleed so profusely when wounded or scratched; and yet, if you cut through the artery which supplies them, there will not be any considerable hæmorrhage. When you divide the artery, the capillaries cease to draw blood to the part, and the hæmorrhage is slight; but if you wound the tumor itself, the blood is attracted to the part as fast as it drains off, and a profuse hæmorrhage is the result.

You should also bear in mind, that there are many animals which are without a heart, and yet in which the functions of the circulation are adequately performed. We have numerous instances of human monsters born without any trace of a heart, and yet well nourished and developed. In cases of this description how is the circulation carried on, or by what power is the blood impelled through the vessels? I do not see what cause we can refer it to, except the vital agency and attractive power of the capillary system. I mention these facts because, in the treatment of inflammatory and febrile affections, it is important that you should have correct physiological views, and that you should bear in mind, that each part and organ of the body may have its vital action deranged, or, in other words, may become congested and inflamed, independently of the action of the heart or the general circulation.

Blisters, then, produce first increased action of a part, and then act as evacuants. They also stimulate the system generally; but if left on until full vesication is produced, they act as evacuants and depletives, and lower the general tone of the economy. I have frequently observed this succession of events in chronic cases, in which it was found necessary to blister repeatedly during the course of the disease. The patients generally told me that they felt better and lighter on the day on which the blister was applied, but on the next day they usually felt weaker and more depressed; and this state sometimes lasted more than a single day. You may therefore apply blisters as excitants and stimulants, or you may employ them as evacuants and depletives; yet there are many persons who seem to forget this dis-

tinction. If in a case of inflammation, occurring in a low state of the system, you propose to apply a certain number of leeches over the inflamed organ, they say no; but they have no hesitation in applying a large blister, leaving it on until it produces full vesication, and thus abstracting a considerable portion of white blood from the system.

You will not expect me to lay down any general rules for the use and application of blistering in fevers; you will find all these matters sufficiently explained in your books and manuals. I am not giving any thing like a regular outline of the treatment of fever; in fact I pass, *per saltum*, from one point to another, without any attention to order or method. You can read methodical treatises, and then compare them with such detached observations as I shall make. And here allow me to make some detached observations on that peculiar state of the brain which we most commonly observe in the middle stage of typhus, and in which blisters form one of our most efficient, and in some instances our only mode of relief. In many of the cases of typhus which come under our observation in hospital, we frequently meet with a train of symptoms strongly calculated to perplex and puzzle, and which should seldom exist in fever regularly treated; these are chiefly cases which are admitted in the middle or latter stage of the disease, and at a period when the patient's state of intellect is such as to preclude the hope of obtaining any satisfactory information from a personal examination.

A man in the lowest class of life, and at a distance from medical aid, is attacked with fever; for the first eight or ten days he is either improperly treated or altogether neglected, and in this state symptoms arise and superinduce others, giving rise to the most unfavourable complications, and rendering the cure difficult, if not impossible. Now of all the symptoms which occur in cases of fever, where the state of the principal organs has been neglected, there are none more formidable, or more fatal, than the cerebral; nor is there any local affection in fever, in which the value of prevention is so unequivocal and decided. What I wish to impress upon you is, that you should always anticipate the cerebral symptoms in fever. Never allow the cerebral symptoms to explode—watch the first scintillæ of cerebral excitement—repress the commencing mischief, and do not allow your patient to be overtaken by formidable inflammation of the brain. This is one of the points in which I have changed my practice. I never allow cerebral symptoms to become established in any of the cases which I have treated of late. Every writer will tell you that when the patient's face is flushed, his eyes suffused, and when he complains of headache and intolerance of light, you should leech and blister his head, give him purgatives, tartar emetic, James's powder, and the medicines calculated to bring down cerebral excitement: but a careful and observant paactitioner will anticipate all these symptoms, although there is as yet no particular flushing of the face, headache, or suffusion of the eyes; and though the patient is still quite rational, he will recognize threatening disease of the brain long before it commences, and take proper steps to prevent its explosion. Watch the functions of the brain attentively, and they will inform you, in almost every case, of the approach of cerebral symptoms. You will find in patients who are about to have cerebral symptoms, a degree of restless anxiety, and a higher degree of energy, than accords with their condition; and they either do not sleep at all, or their sleep is broken by startings and incoherent expressions. When you speak to a person in this state, he answers in a perfectly rational manner; he will tell you that he has little or no headache; and were you to be led away by a hasty review of his symptoms, you would be very likely to overlook the state of the brain. If you inquire closely, you will find that he scarcely ever sleeps, or even doses—that he is irritable, excitable, frequently incoherent, and muttering to himself. Under such circumstances, although there is no remarkable heat of scalp, suffusion of the eye, or headache, I am frequently led to suspect the supervention of cerebral symptoms, particularly about the ninth or tenth day of the fever (for it is generally about this period that cerebral symptoms begin to manifest themselves); and whenever I observe these premonitory indications, I never hesitate in taking proper measures to anticipate the evil. I immediately order the hair to be shaved off, and blister the whole scalp. Thus, at the period when disease of the brain would most probably have set in, I have the whole external surface of the head pouring out serum, or even suppurating: and when by this treatment I have opposed a barrier to the further progress of the disease, the exhibition of a little tartar emetic will soon remove every trace of it. In laying down this plan of treatment, I have supposed that the patient has been properly treated from the beginning, and that the earlier symptoms of inflammatory excitement have been combated by bleeding, leeching, and other appropriate depletory measures.

There is, on the other hand, an opposite

state of the patient, which in like manner informs me that danger to the brain is at hand. In this case, the patient is almost continually sleeping. When you enter his chamber in the morning, and ask how he does, his attendant generally tells you that he has passed the night most favourably, and that he has slept without almost ever waking since your visit on the preceding afternoon. If he awakens to take drink, he quickly drops asleep again, and when you arouse him he looks rather heavy; there is some slight effusion of the tunica adnata, and some appreciable congestion about the external parts of the face and head. Persons in this state, though apparently doing well, and even where they have been properly treated in the beginning, about the ninth or tenth day begin to rave, and exhibit undoubted proofs of congestion and excitement of the brain. Now, in all cases of this description be on your guard, and do not allow symptoms of dangerous import to steal on you. Here you will derive great benefit from the use of blisters. I was lately called to a very remarkable case of this kind, at some distance from Dublin. The patient slept almost constantly, and complained of no headache or heat of scalp. From an attentive examination of the case, however, I was led to predict the approach of cerebral symptoms. Observe, this was a case of spotted fever; and in this form of fever you can predict the occurrence of such symptoms with a greater degree of confidence. The patient's pulse was 96, his tongue presenting nothing worthy of remark, his behaviour and speech rational, and his sleep almost constant. Recollecting, however, the period of the fever, and observing carefully the condition of the cerebral functions, I had his head shaved and blistered. Notwithstanding this precaution, his cerebral symptoms had proceeded so far that he subsequently got a slight attack of paralysis of the face and tongue, accompanied by a fixed state of the pupils, which would neither contract nor dilate. After having blistered his head extensively, I gave him the tartar emetic solution, to the amount of one eighth of a grain every second hour. These measures were completely successful in removing the cerebral symptoms, and I have no doubt that the active precautions which had been taken were the means of saving his life.

Now there is one symptom connected with cerebral excitement in fever which is well worthy of your notice, as its existence is often sufficient of itself to give timely intimation of the approach of irritation or inflammation of the brain. This is, the state of the respiratory function. In fever, the breathing will often announce the approach of cerebral symptoms for days before their actual occurrence. When, in cases of typhus, you find the patient's breathing permanently irregular, and interrupted by frequent sighing — when it goes on for one or two minutes at one rate, and then for a quarter or half a minute at another rate, you may rely upon it that sooner or later an affection of the brain will make its appearance. You will frequently observe the same kind of breathing preceding attacks of apoplexy and paralysis, and indeed it was the occurrence of this symptom, in these and other cases in which the functions of the brain were deranged, that first drew my attention to this kind of breathing. The first time it engaged my attention was in a remarkable case of an apoplectic nature, which I sat up a whole night to watch. On recollection, I found that I had frequently observed an analogous state of the respiratory function in fever, on several ocasions, although its connexion with excitement of the brain had not struck me before. I speak here of irregularity of breathing, independent of any pectoral affection. But when the patient breathes in a permanently irregular manner, at one time at a certain rate, and at another at a different rate,— when his respiration is suspicious and heaving, without any disease of the chest or great debility, — you will have some grounds to suspect the existence of cerebral derangement. I am in the habit of calling this kind of breathing cerebral respiration, because my experience has told me that it is almost invariably connected with oppression and congestion of the brain. To recapitulate:—When you find a patient in fever lying constantly awake, or when, on the contrary, you find him continually slumbering,—when there is a certain quickness of manner and irritability,—and when the cerebral respiration has been noticed for some time, without any concurrent debility or pulmonary disease,—under such circumstances, you may, in cases of maculated typhus, predict the approach of cerebral symptoms; and the period about which they generally manifest themselves, is the eighth, ninth, or tenth day. Now, in cases of this description,—if you have previously used leeches and antiphlogistics to a sufficient extent,— your best plan will be to shave and blister the whole scalp. Dr. Little, of Belfast, and Mr. Kirby, of this city, have fallen into the same train of ideas, and employ blisters at a very early period of the disease, with the view of combating cerebral excitement. In a recent instance, in private practice, I think I saved the life of a young gentleman in Harcourt-Street by extensive blistering of the scalp on the fourth day of fever. We were not accustomed to blister at this early period of fever. Formerly it

was the practice to bleed and apply leeches for several days together, and never to have recourse to blistering until towards the latter stage of the disease. In common inflammation, or in arachnitis, we do not blister until we have carried depletion by the lancet, leeches, and purgatives, as far as the patient's strength will allow. But this is not the case in fever: the cerebral congestion and irritation, or inflammation, (call it which you will), which accompanies typhus, differs essentially from ordinary arachnitis or encephalitis, and requires very often a treatment strikingly different.

One physiological fact connected with sleep may be noticed here. It has been stated by Mr. Mayo, that the pupils are contracted during sleep. This is in itself a very curious fact, and I was anxious to verify it. Now we had an excellent opportunity yesterday morning of trying what the state of the pupil was in two patients who lay soundly sleeping in the fever ward. We came up softly to them as they lay on their backs, and in a most favourable situation for observation, just under one of the windows; and having opened the eye-lids, found that the pupil was actually contracted to the size of a pin-hole. It remained in this state for a while, and then expanded when they awakened. This is a very curious fact, and appears to be a very beautiful instance of the protective care of nature. To protect the eye while we sleep, nature, as it were, draws the curtain, and thus defends the delicate organ from any accidental dazzling, at a period when consciousness slumbers, and is off its guard.

Blisters applied extensively to the shaven scalp, are not only valuable in fever, but also in other diseases, and that under circumstances in which little benefit could be expected. The same effects may be produced by rubbing the whole scalp with tartar emetic ointment; but from the pain and inflammation it produces, this proceeding is seldom adopted. I have, however, occasionally employed it; and on two recent occasions with the most fortunate results. A friend of mine had lost two children from hydrocephalus. About five weeks ago another child, an extremely fine boy, was attacked with symptoms of the same disease. After having laboured for a fortnight under fever, with great restlessness, vomiting, and diarrhœa, he was observed to utter frequently that faint cry which is so characteristic of hydrocephalus, and to roll his head constantly from side to side. These symptoms were soon afterwards succeeded by constant motions of the right arm and leg, and subsequently by paralysis of the opposite side. I was consulted before the paralysis occurred, and advised the child's father to have the whole of the blistered scalp well rubbed with tartar emetic ointment. The boy recovered completely. I derived also a very striking advantage from the use of the same remedy in a very remarkable epidemic which attacked a family in the neighbourhood of Rathmines, and which was witnessed throughout its whole course by my friend Dr. Burke and myself. One of the family, a young lady, was attacked with symptoms of fever, accompanied by pain in the back of the head and stiffness of the neck. After a few days, symptoms of inflammation of the cerebellum and upper part of the spinal cord became developed. About the seventh day she got strabismus, and soon afterwards was attacked with convulsions: the pupil became permanently dilated, and she was quite blind. I was called to see her at this period, and found her almost in a state of insensibility, with involuntary discharge of urine and fæces, cold extremities, and irregular pulse. Thinking that nothing could be done for her, I was about to leave the room, when I asked the nurse, could she swallow? She replied she could, and immediately proceeded to offer the young lady some drink, which she swallowed without any difficulty. This at once arrested my attention. I said to myself, if this patient can swallow, she must be still conscious, and while she is so, there is a chance of saving her. I ordered the whole of the scalp, which had been previously blistered, to be rubbed with tartar emetic ointment; violent inflammation ensued, and she recovered completely. But the curious part of the case is this:—Her brother and sister were attacked, in exactly the same way, a few days afterwards, although less formidably, and were cured by the same treatment. Shortly afterwards two of the servants got pain in the back of the head and stiffness of neck, followed by signs of an inflammatory affection of the cerebellum and spinal cord. They were treated in the same way, and recovered.

What could be the cause of this peculiar fever, manifesting itself in exactly the same way in all the individuals of the family who were attacked? I endeavoured to arrive at the cause, but could not; and I merely state the facts, without wishing to attempt any thing like an explanation. But the history of this extraordinary form of disease is exactly as I have told you. It has been witnessed by Mr. King and Dr. Burke, and they, as well as myself, were very much struck with the novelty of the phenomena.

A CASE OF GANGRENE FROM "DISEASE OF THE HEART."

To the Editor of the Medical Gazette.

Sir,

If you deem the inclosed case worthy of insertion in your journal, it is very much at your service.—I am, sir,

Your obedient servant,

William Clark,
Surgeon.

Devizes, Jan. 29, 1837.

Mrs. Brown, æt. 50 years, of rather plethoric habit and florid complexion, was attacked on Saturday week last, whilst walking from her cottage into this town, a distance of about a quarter of a mile, with, as she expressed it, a fluttering of the heart and difficulty of breathing, so severe that she was scarcely able to return home. From that time to Friday last, December 3, she says she did not feel positively ill, but occasionally experienced a sense of suffocation, with a disposition to faintings, and especially so after any exertion, such as walking up stairs, &c. Being, however, an active woman, she continued to perform her daily household duties, and did not call for medical aid.

According to her own account she had previously enjoyed good health, not having suffered from the ordinary complaints of colds, &c. more than other people. On Friday night one of her sons returned home very late, and all the family having retired to bed, she went down stairs without her stockings to open the door for him, and in doing so placed her right heel on the damp brick floor. At that time she was in a profuse perspiration, but did not feel chilled or otherwise ill on her return to bed.

On Saturday morning she rose as usual at eight o'clock. Between ten and eleven, A.M. she had severe pain in her right foot, darting upwards to the thigh; this pain increased until her foot and leg became benumbed, and she told a neighbour she was sure she was "death-struck;" she also had severe pain in her bowels. Mr. Mayo was then called in, who found the foot and leg to the knee cold, and sensation almost or entirely gone. She was able to move it slightly. Her pulse was to a remarkable degree irregular, varying from extreme rapidity to the opposite extreme of slowness; at one time strong, at another scarcely perceptible. Her bowels were costive, and had been so for a week previously, having had only one or two stools during that time, and those very scanty, dark-coloured, and fœtid. Tongue furred; skin hot, and covered with clammy perspiration; dyspnœa and pain over the region of the heart.

Mr. Mayo conceived that, from the costive state of the bowels, an accumulation of hardened fæcal matter might possibly have taken place in the colon, and pressure from this cause might have obstructed the circulation in the limb. No tumor could, however, be found in the right iliac region; there was slight tenderness on pressure. He ordered—

Ol. Ricin. ℥j. statim.

This had no effect on the bowels. At two, P.M. ol. ricin. ℥j. with a drop of croton oil, also without effect. At nine, P.M. V.S. ad ℥x. and an injection. This brought away only a small quantity of fæcal matter.

℞ Hyd. Subm. grs. iij.: Ext. Colocynth. c. gr. x. Omni tertiâ horâ.

After taking two doses, the bowels acted freely. The evacuations were extremely fœtid and dark-coloured. All this time the leg remained in the same state; bottles of hot water were constantly kept to the foot and leg, and the whole limb wrapped in flannels. A mustard plaster was also applied to the sole of the foot.

Sunday morning.—Mr. Mayo being out of town, I saw the patient at his request. On examining the limb I found it of a leaden hue; from the toes to the knee it was cold, and without sensation. No pulsation could be felt in the popliteal or posterior tibial arteries, but slight action remained in the femoral, immediately under Poupart's ligament. Her pulse at the wrist was very irregular, and not at all synchronous with the action of the heart, the pulsations of the latter being (at times) as three to one of the former. There was no unnatural sound in the heart's action, none that enabled me to name any specific disease of that organ; but there was no pause between the diastole and systole, the

one following the other in rapid and constant succession, or rather, the one seeming to run into the other. It rather appeared as if the heart had not sufficient power to propel the blood through the body, in consequence of its being overloaded. Dyspnœa, with pain over the pericardiac region; no headache or vertigo; the warmth of the left leg perfectly natural. The sinapism had no effect on the sole of the foot.

Four o'clock P.M.—I requested Dr. Seagrim to see the patient with me. The case struck him as being very singular, inasmuch as there was no assignable exciting cause for gangrene attacking that particular limb. He ordered a small blister to be applied over the heart, and a lotion of Tinc. Lyttæ and Opii to be rubbed into the limb. Bottles of hot water and flannels to be continued. A tingling sensation was felt after the application of the lotion.

Monday morning.—The leg was covered with patches, irregular in shape, about the size of a crown piece, of a dark purplish hue, and extending about three inches above the knee, on the inner side of the thigh. The pain being very severe,

℞ Mur. Morphiæ gr. iss. every four or five hours.

Tuesday morning.—The morphine has given the patient a quiet and comfortable night. The patches which existed yesterday have spread into each other, and the whole limb has now assumed a dark leaden hue. The femoral artery cannot be felt. Constant thirst; tongue thickly coated. No headache or vertigo; pulse somewhat lessened as to rapidity, but irregular as before; complains of frequent pains darting from her foot to her thigh. Dr. Brabant saw the patient this morning, with Dr. Seagrim and myself. He was also struck with the singularity of the case, and declared his inability to assign any cause for the want of circulation in that limb. He examined the heart with the stethoscope, and remarked upon its rapid and unusual action, but could not say whether it was primarily or secondarily affected.

Ten, P.M.—The patient lies in the same state; she is composed in her mind, and does not complain of much pain. Bowels not open; pulse rather softer. On the anterior part of the thigh she complains of severe pain when the part is touched. The jugular veins much distended.

Wednesday morning.—The pulse today is more frequent, and the general symptoms of constitutional irritation more urgent; gangrene has not extended up the thigh, but the leg itself is of darker hue. Complains of darting pains.

Seven, P.M.—Restless and uneasy; pain over the cardiac region. She is, and has been, taking port wine. Dr. Tomkins saw her with me this evening.

Thursday morning, 10, A.M.—There is no improvement; pulse more feeble, and general symptoms stronger; she speaks with difficulty; great dyspnœa. There appears to be contraction of the features, the nose and mouth particularly; there is, and has been, a pallor around the mouth from the beginning, but which is more apparent this morning.

Three, P.M.—About three inches above the knee nature is attempting a line of demarcation; there is a certain hardness and tenderness upon touching it, which truly indicates an attempt at separation. It will be recollected that gangrene has not extended for the last two days. Bowels have not acted.

Ol. Ricini, ℥ss.

Eight, P.M.—Bowels have acted. The patient complains of flatulence; pulse rather stronger; port wine and arrow root *ad libitum*.

Friday morning.—Much the same as to general symptoms; complains of severe pain in the limb. Bowels have again acted; the fæces natural in colour and consistence. Yeast poultices.

Eight, P.M.—The thigh considerably enlarged, without any other symptoms of inflammation. There is no vesication of cuticle; pulse as before, very irregular. The abdomen is distended with flatus.

Ol. Ricini, ℥ss.

Saturday, 11, A.M.—This morning her bowels have acted twice; constitutional irritation diminished; pulse firmer, but irregular. Tongue cleaner, and tolerably moist. Gangrene not extended.

℞ Sulph. Quinæ, grs. xxiv.; Mucilag. q. s. Divid. in pil. xii.; cap. i. omni tertiâ horâ.
Wine and arrow root continued.

Eight, P.M.—Continues better; her bowels acted after each pill. A blush

of redness has in some degree supplanted the dark hue which before existed. Two or three small vesications on the anterior and middle part of the tibia. Tongue moist; pulse increased in volume, but irregular; slight pain or soreness (as she terms it) over the abdomen; frequent eructations; there was a tinge of blood with the last stool. The limb to be enveloped in yeast poultices.

Mur. Morphiæ, gr. ss. to night.

Sunday morning.—The limb has again assumed its dark hue. The patient did not sleep well during the fore part of the night, and her nurse gave her another dose of the morphine. She is now under its influence. Pulse not so firm as yesterday.

Sunday evening.—No alteration.

Monday morning.—Nausea; singultus. The general symptoms are not more urgent than they have been for the last two or three days, but the limb has again undergone a remarkable change as to colour. It has the appearance of a limb in the first stage of erysipelas, pervading *almost all* the surface which was before livid. *No* change of colour was produced by compression at any time. It is perfectly cold and senseless. Gangrene has not extended, and nature is continuing the attempt at separation. The nurse says, that during the night she muttered in her sleep, and that she had observed her picking at the bed-clothes. Pulse not materially altered; tongue moist and clean.

Monday evening. — No alteration since the morning.

Tuesday morning.—Florid aspect of the leg continues; vesications rather more numerous, but in other respects the same. General symptoms worse.

Tuesday evening.—The limb has a more shining appearance, and varies in colour; cuticle of a bright red.

Wednesday morning*.—No alteration in general symptoms. The leg has partly reassumed its leaden hue. Above the knee, on the inner side, there is a bright red patch, irregular in shape, and extending downwards over the interior condyle to the anterior and upper part of the tibia, and bounded externally by a distinct black margin. (It should be remarked, that during these frequent changes in colour, the limb has remained perfectly lifeless).

* At this period Mr. Waylen's sketch was made.

Wednesday evening.—The margin of black which existed this morning has disappeared.

Thursday morning.—The patient has passed a comfortable night. Pulse feeble; tongue furred; decomposition rapidly advancing in the leg.

Thursday evening.—Pulse still more feeble, and decomposition extended.

Chloride of Lime as a lotion.

Friday morning.—The patient has slightly rallied.

Saturday. — There is an extensive slough on the inner side of the thighs, and the points at which nature attempted a separation, apparent to the eye; it seems as if the limb had been tightly girt with a cord, the depression remaining. Pulse scarcely perceptible; her intellect continuing perfect; no headache; occasional nausea, without actual vomiting.

Tuesday morning.—Since my last report, the patient has remained in the same state as to constitutional symptoms. The sloughing has advanced rapidly on the inner side of the thigh, and under the ham; sinuses also exist, running upwards for two or three inches under the sound integuments. The separation has proceeded in such a ragged and irregular way, that no healthy part is to be distinguished. She is still able to take port wine, but rejects the arrow-root. She has also taken strong beer.

Muriate of Morphia continued omni nocte. Poulticing, with the lotion kept constantly to the slough.

Premonitory symptoms of death have made their appearance. There is little to add; our patient continued to exist until this morning (Sunday). On Friday night delirium came on, which continued till her decease. The sloughing had made great progress on the inner and under part of the thigh; the femur was perfectly bare from the interior condyle to the extent of four inches.

Autopsy.—On opening the chest and slitting up the pericardium, we did not observe any unnatural quantity of serum, but the heart itself was considerably enlarged; on dividing the great vessels and withdrawing it, we found the enlargement to depend upon the immense dilatation of the sinus of the right auricle, which was filled with blood, and presented the appearance (if I may so term it) of a large venous aneurism. On opening this cavity,

which was at least four times its natural size, it was observed to be very muscular, and gave rather the aspect of the internal structure of a ventricle than the smooth internal surface of a sinus. The tricuspid valves were slightly thickened, but could not be pronounced actually diseased. The right ventricle natural, as were the semilunar valves of the pulmonary artery. The left auricle twice its natural size, and the mitral valves cartilaginous at their edges. The left ventricle contracted without any hypertrophy. Aortic valves healthy. The lungs healthy in structure; the liver somewhat darker and firmer in texture than usual. We now proceeded to examine the vessels leading to the gangrenous limb. The common iliac artery on the right side was unusually small, certainly not larger than the axillary, and the femoral under Poupart's ligament did not exceed an ordinary brachial. We concluded from this that the vessels on the opposite side would be proportionably large, but, upon examination, we were mistaken; both were equally small. In tracing the femoral artery down the thigh, it gradually tapered until its cavity became obliterated above the part where the sloughing commenced. The coats perfectly healthy. The veins were unusually large, as if to make up for the deficiency in the size of the arteries. The iliac veins forming the abdominal cava were in direct contrast with the smallness of the arteries, bifurcating from the aorta.

I have thus endeavoured to give in detail a case which has excited much interest amongst the medical men in this town from its singularity. I do not know of any case (published) of gangrene arising from disease of the heart. Its mysterious and sudden appearance without any sufficient exciting cause, the remarkable irregularity of the pulse, and the history of previous symptoms, all pointed to the heart as its source, although we could not discover any specific or certain disease in that organ. The rapidity of its action, with other constitutional symptoms, indicated disease. The result of the post-mortem examination has clearly proved that disease of the heart is a most formidable predisposing cause of gangrene of the extremities, inasmuch as the only exciting cause (at least if we take the history) was the woman's placing her right foot on a damp brick floor. I mentioned that the contrast of development between the arteries and veins was remarkable. If the former were half their usual size, the latter were at least double their natural calibre; and this may account in some measure for the immense dilatation of the right auricle—(a large apple has been placed in its cavity, which it held with ease)—whilst the smallness of the arteries may be accounted an auxiliary predisposing cause for the commencement of gangrene. There were many points in this case which differed from the ordinary course of gangrene:—1st. Vesication of cuticle was the last symptom that appeared. 2dly. The extraordinary change in the colour of the limb—not, indeed, the gradual variation indicating the natural progress of mortification, but the *entire change*. In the morning I should find the limb of the usual leaden appearance; in the evening a bright scarlet blush suffused its whole surface, and this blush would again be lost the next morning. We were quite unable to account for this phenomenon: it could not have been the effect of capillary circulation, for the limb was cold, and perfectly senseless; neither could it have been, as at first supposed, the consequence of exposure, since the parts enveloped in poultices were equally changeable. 3dly. The abatement of constitutional irritation. Those gentlemen who kindly gave me their assistance and advice predicted a speedy termination of the case, from the high degree of irritative fever which prevailed; but as soon as gangrene was thoroughly established, and its further extension up the thigh checked by a line of demarcation, the clammy perspiration, the thickly-coated tongue, the constant thirst, and the difficulty of breathing, all gave place to a more natural heat of the skin, to a moist tongue, to a moderate wish for fluids, and to a comparatively easy respiration. During the first ten days there appeared to be a struggle against the disease; but when this was fruitless, and gangrene rapidly advanced, nature came to her assistance in another way, and tried to support her through the sloughing stage. It was at this time that the expediency of amputation was slightly agitated,—not, indeed, with much hope of ultimately saving life, but rather to remove a positive nuisance to herself

and attendants. The state of the heart, and an impartial review of the case, at once decided us against its attempt.

It has fallen to my lot to have witnessed, within the last five years, two of these melancholy cases. The first happened during my pupilage in London. The patient was a servant girl, æt. 19 years, who died on the tenth day from the first appearance of gangrene. I should have been glad to have added the notes of this case, but fear that I have already taken up too much room. I may, however, mention, that in this instance the tricuspid valves were obliterated.

ACCOUNT OF A METHOD OF OPERATING FOR HYDROCELE.

To the Editor of the Medical Gazette.

Sir,

In the first number of a new periodical, entitled "The Annals of Medicine," which I saw lying on a friend's table a few days ago, is an account of an operation for hydrocele *invented* by a Mr. Lewis, with observations by Mr. King, lecturer at the Blenheim Street School of Medicine.

Having been in the habit of performing this operation publicly in the wards of St. Thomas's Hospital for nine months past, and never having heard or read of such an operation prior to my performance of it, *precisely in the manner described by Mr. King*, I had regarded my claim to the priority as established, and waited only the time requisite to test its real value, before submitting the matured results to the profession. I ought, however, to mention the following fact. On Saturday, May 6th, a fortnight after my performance of the operation with the acupuncture needle in the presence of the pupils with a satisfactory result, a letter, as I was informed by one of them, appeared in the Lancet, describing the exact process, as Mr. Lewis's new plan of treating hydrocele.

In the summer of 1835 I first conceived the opinion, from an observation made in private practice, in a case of old hydrocele simply punctured, that the puncture of the tunica vaginalis would be followed by an inflammatory change of the contents of the sac from a serous to an albuminous secretion. In lecturing on hydrocele in the surgical course of the ensuing session, 1835-36, after describing and canvassing the various modes of treatment, and giving a decided preference over these to that of Sir James Earle, I mentioned the particulars of the case alluded to, and the opinion I had formed, and stated the probability that this more simple method of treatment might be found effectual, but that time, and extended observation and careful comparison of results, would be necessary to show that it was as little liable to failure as the operation by injection. In the spring of 1836 I commenced the practice of the operation; first, making a single puncture with a trochar; secondly, with a fine sharp-pointed probe; thirdly, with an acupuncture needle of the largest size; and then planting several punctures at equal distances, according to the bulk of the hydrocele. A drop or two of fluid escaping at the several needle orifices, a rag dipped in cold lotion was laid on the part, and the general result was more or less œdema of the scrotum, and in three days a total disappearance of the swelling. I soon ascertained that it was not by adhesive or any other mode of inflammation that the change was effected, but that the tunica vaginalis was left perfectly free and natural in its relation to the testis, and the scrotum of its proper weight, size, and figure, so that relapse was more to be apprehended.

I was at first impressed with the idea that the tense condition of the tunic was essential to the curative effects of the puncture, and thus explained the difference of result from that obtained by complete evacuation and collapse of the sac. But this opinion I have had occasion to modify, finding that a freer discharge than could be obtained by the round needle, and the consequent partial collapse of the sac, was on the contrary more immediately and certainly productive of the infiltration of the cellular membrane, and consequent absorption of the fluid. I have therefore since employed a very fine trochar, smaller than any in common use, as the preferable instrument. My mode of proceeding is to put the scrotum on the stretch, in front of the testis, by

embracing it with the extended thumb and fore finger of the left hand; and placing the patient opposite a window on which the sun falls, or at all events a strong light, I command the view of the transparent bag so perfectly as to avoid veins and any point of accidental adhesion or thickening, which is always marked by a corresponding opacity. The punctures are made in a perpendicular direction and in quick succession, about equi-distant from each other, while the tunic is kept tense by graduated compression. Of several cases thus treated some have remained cured; others, apparently cured, have relapsed after a fortnight or three weeks, and one after three months; but I do not consider this a fair criterion of the value of the practice, because from the shape and size of the acupuncture needles chiefly used in these cases, the points on which I believe the success of the operation mainly depends were not accomplished. These are, a freer collapse of the sac by the removal of a sufficient portion of the fluid which the trochar puncture ensures, and the more complete diffusion of the remainder into the surrounding cremaster and cellular tunics, obtained by the multiplication of the punctures, while the tension of the sac is preserved.

On the third day the fluid is absorbed, and the two sides of the scrotum are uniform: indeed, this is sometimes the case on the second day; but if the punctures are so small as not at once sensibly to reduce the bulk of the swelling, a single drop only exuding at each orifice, the reduction is generally much slower, or even fails altogether. Now every body knows that the drawing off of the fluid of a hydrocele through a canula is almost invariably followed by its reaccumulation, and it is not uncommon for elderly men, who are timid, or averse to injection, to call upon their surgeon to have the tunica vaginalis relieved of its contents once in a year or in two years.

Assuming that the simple puncture as above described is in a certain proportion of cases a permanent cure, to what is the difference of result attributable? This is a fair question, and not as it appears to me very obvious of solution. But it is needless to conjecture about the *modus operandi* of a supposed remedy, or to discuss the advantages, real or comparative, of an hypothetical cure. Let the premises, therefore, be well ascertained.

I may mention two probable sources of fallacy as to the facts; first, the want of a sufficient interval of time and extent of observation to establish such a difference of result; and secondly, the false impression which the surgeon receives from the disappearance of the fluid, in whole or in part, by absorption, that it is the institution of a curative process, instead of a natural and necessary result of the effusion of an innocuous fluid into the cellular membrane. I confess myself so far unprepared to decide the fact of a permanent cure, that it seems idle to set about the rationale.

Negatively, the question when we are ripe for it, might be reduced by observing that there is no evidence of inflammation following the transfer of the fluid from the tunica vaginalis to the cellular membrane, in either texture, and the effused fluid is too rapidly absorbed to operate with any permanent effect in the way of compression, thus converting the disease into the remedy. The puncture is the same whether the canula is employed or not, so that in fact the only difference in the circumstances of the two cases is that between the *gradual* and the *sudden* evacuation of the sac of the hydrocele.

What is essential to justify the conclusions so readily adopted by Mr. King, is, evidence of a positive process by which the disease is not only removed for a time, but removed altogether. The second part of the action is wanting—the removal of the fluid, artificially or naturally, or by a half-and-half process, falls far short of the cure; and it is *à priori* against the probability of cure, that the parts are left in a perfect state, and that no impediment consequently presents itself to the recurrence of the dropsy, which is confirmed by all analogy and pathology of dropsies. Otherwise I grant it is easy to see and point out the advantages of a perfect as of a morbidly altered condition of parts after operation, and to enumerate other disadvantages attending other successful modes of proceeding as compared with this, if this be equally so, but the superiority of the method as well as the theory of cure, may as well be deferred until the fact is placed beyond

doubt. Mr. Lewis, indeed, says, (May 7, 1835,) that he has tried the plan of single puncture with a needle for the last two years, and therefore can vouch for its success in *every* case of hydrocele. If by success is meant the disappearance of the fluid for a week or a month, or two months, I do not mean to question the statement, though a startling one; but if it means, what alone it should mean, a *radical* cure of the complaint, I can only say that his practice has been too singularly fortunate to be a safe precedent for others, even though their cases be not numerous.

As matters stand, the merits of the proposal (it signifies little to the public to whom it belongs) will soon be correctly appreciatad by my colleagues, the surgeons of hospitals. It recommends itself by its safety and simplicity. A similar mode of proceeding with dropsical bursæ has proved perfectly successful, when followed by pressure, and it is probable that this addition to the treatment in hydrocele for a short time subsequent to the puncture, and which though not so easy of adjustment may still be efficiently employed by means of a narrow roller, would be available against relapse.

I am, sir,
Your obedient servant,
BENJAMIN TRAVERS.

Bruton Street, Feb. 1, 1837.

SEQUEL OF A

CASE OF EXTRA-UTERINE PREGNANCY,

IN WHICH A FULL-GROWN FŒTUS WAS REMOVED BY AN OPERATION FOURTEEN MONTHS AFTER CONCEPTION.

With Remarks.

To the Editor of the Medical Gazette.

SIR,

I SHALL feel obliged by the insertion in your journal of the continuation of the case of extra-uterine pregnancy, the former part of which is given in the 17th volume of the MEDICAL GAZETTE, p. 169. I have appended some observations, principally with a view of pointing out a more correct diagnosis than has hitherto prevailed, and to improve the method of treatment of these unfortunate deviations from the ordinary course of nature.—I am, sir,

Your obedient servant,
FRANCIS HUTCHINSON.

92, Farringdon Street,
Feb. 1, 1837.

From the date (26th Oct. 1835) of my former report, which included the treatment during the first month after the operation was performed, the size of the wound of the abdomen, and the quantity of discharge therefrom, have gradually decreased. My patient had gained such an increase of strength, that she was enabled to walk a considerable distance without feeling fatigued; her appetite was good, and her general health continued improving up to January 14th, 1836, nearly four months after the operation, when she was seized with sickness, and vomited three or four times; complained of a sense of languor; of her feet and legs swelling towards evening; of pains across the loins, and of a general soreness over the body; slight feverishness present; action of the bowels regular.

January 15th.—Continuation of sickness; other symptoms enumerated remain much the same.

17th.—Vomiting this morning more severe than before, accompanied with an increase of pain in the lumbar region. About 12 o'clock (meridie) the catamenial discharge manifested itself, the first time of its appearance since the operation; it was of a darker hue than usual, and mixed with small clots of blood.

18th.—Continuation of catamenia, which have now assumed a more natural appearance; subsidence of pain, sickness, &c. The patient expresses herself much relieved.

21st.—Catamenia have disappeared; decrease of discharge from the wound of the abdomen.

March 7th.—Aperture of wound scarcely admits the extremity of a probe; discharge very small in quantity, and of a healthy quality. Patient states that she has increased considerably in bulk, and more especially so in the abdominal region. I recommended the application of a bandage, to be worn round the abdomen as tight as could be borne without inconvenience.

15th.—Patient called to inform me that the wound was quite healed. I examined the part, and found the cicatrix firm and complete. Patient observes that she sleeps well; that her appetite is good; that her catamenia recur with regularity and without pain; that she is as stout and strong as before becoming pregnant; and, in short, that she never was in a better state of health.

Nov. 16th.—I saw her yesterday; she continues in the enjoyment of good health.

Remarks.

By extra-uterine pregnancy is meant the development of the fœtus out of the cavity of the uterus. At the period of impregnation, the ovum, instead of being transferred to the uterus, according to the natural process of gestation, is either detained in the ovarium, or, at its expulsion from the ovarium, escapes into the cavity of the abdomen, where it lodges; or, on leaving the ovarium, is detained, *in transitu*, by the fallopian tube. These constitute the three different species of extra-uterine pregnancy which are generally enumerated by writers; the first of which is termed *ovarian*, the second *ventral*, and the third *tubal*. Dr. Ramsbotham mentions the existence of a fourth species, which he terms *utero-tubal*, where the fœtus lodges in the uterine portion of the fallopian tube.

Burns, in his Principles of Midwifery, observes, that "of all the species of extra-uterine pregnancy, the tubal is the most frequent, and the ventral the most rare." Dr. Davis, in his work on Operative Midwifery, has entered largely into the subject, and refers to about ninety recorded cases of extra-uterine pregnancy, in which list the proportion of the several kinds are as follows:—

Ventral	9
Ovarian	16
Tubal	40
Of pregnancies extra-uterine, but of uncertain locality . .	24

"All the cases of ventral gestation, which are not numerous, and of the existence of which, as a special variety of extra-uterine pregnancy, some writers have expressed great doubts, have, without a single exception, terminated fatally within the period of natural gestation, and the greater number within the earlier weeks.

"All the examples of ovarian gestation terminated fatally, and the greater number at an early period. One had arrived at the fourth month, and another, that of Forrestiers, at the sixth or seventh month of gestation."

Tubal pregnancy is commonly fatal from about the sixth week to the third month, the tube giving way by ulceration, and the patient dying from hæmorrhage into the peritoneal cavity. "The subjects of about one-fourth of the whole number," according to Dr. Davis, "survived the full period of gestation."

"Amongst the results of cases under the last division of extra-uterine conception, viz. that of uncertain locality, we have happily many examples of recovery after years of various affliction from the presence of extra-uterine cysts within the peritoneal cavity."

From the nature of the fluid discharged on tapping, which was of a chocolate colour, thickish, and similar to the fluid met with in some diseases of the ovarium, I was at first induced to consider this a case of ovarian gestation; but on more mature deliberation, and for the following reasons, I am at present inclined to place it under the head of ventral gestation.

1st. We know that of the recorded cases of extra-uterine pregnancy which have attained the full period of development, the greater number belong to the class of ventral gestation.

2d. The locality of the fœtus in the present instance was very high up in the abdomen, and from its lying transversely, with the head to the left side, we might naturally suppose, if it had belonged to the ovarian division, that it would, during its development, have been more likely to have been situated lower down, towards, and perhaps occupying some portion of, the pelvis.

3d. The sac was well circumscribed, as far as could be ascertained from the finger being passed into and moved over its inner surface.

4th. During the performance of the operation, nothing but the abdominal parietes and the fœtal sac were divided.

The assigned causes of extra-uterine fœtation seem altogether hypothetical; such a state of things as might give rise to the occurrence is very readily

conceivable, when we consider the minuteness and consistence of the germ, the smallness of the tube through which it ought to pass, and the complex nature of the gestative apparatus; and surprise might naturally be excited in the occurrence of so few cases of this particular deviation from the ordinary course of nature. Imperviousness of the fallopian tube, produced after impregnation, from whatever cause; adhesions between the sides of the tube and other parts; malformation; fright at the time of conception, &c. are mentioned amongst the probable causes.

Treatment.

The cases of extra-uterine pregnancy on record in which recovery has been effected, are not very numerous. This fact may be accounted for from the extreme difficulty of forming a correct diagnosis, in conjunction with the comparative variety of these cases; the fatality may likewise have been increased by the prejudice which has hitherto pretty generally prevailed, in regard of making incisions into the peritoneal cavity, under the dread of inducing fatal inflammation of this membrane—a dread which has perhaps been the principal stumbling-block to the advancement of abdominal surgery, (especially in this country) notwithstanding the vast importance of the subject*.

That the assertion in reference to the expression prejudice is well founded, will, I think, be amply supported by referring to the experiments and opinions of Dr. Blundell, embodied in his work entitled "Researches, Physiological and Pathological," undertaken with a view to the improvement of the surgery of the abdomen in the human being.

Dr. B. instituted a series of important and valuable experiments on rabbits; amongst these the following may be mentioned. From some rabbits he removed the left kidney, from others the spleen; in some he punctured the fundus vesicæ, and tied the aperture with a ligature; in two he cut off at least one quarter of the bladder at the fundus, &c. &c.: some of the rabbits in each of these experiments completely recovered.

Dr. B. infers, I think fairly, from these experiments, that large apertures into the peritoneal sac in the rabbit are not necessarily, nor perhaps generally productive of fatal inflammation; that the kidney, the spleen, and a large piece of the bladder, may be extirpated without necessarily causing death, though death under the first operation is probable; and that success in the abdominal operations on the rabbit furnishes a presumption in favour of success in similar operations on the human abdomen.

In the treatment of extra-uterine pregnancies, much will always depend upon the character and circumstances of each case; but in the cases which have advanced to or near the ninth month of gestation, does it not seem probable that in some instances much suffering and danger might be avoided by a prompt and early recourse to an operation for the removal of the fœtus and appendages, where the diagnosis is sufficiently indicative of the nature of the case? and does not that opinion seem to be both justified and strengthened on referring to the cases of ventral and ovarian gestation detailed by Dr. Davis, all of which, being left to nature, terminated fatally?

We know that in cases which have arrived at the ninth month of gestation, symptoms, from the attempts at expulsion, as in natural labour, manifest themselves also in extra-uterine pregnancy; a little blood comes away, and if the tunica decidua is formed, it is expelled at the same time; would not this occurrence of simulated labour, with a close attention to the sudden remission of symptoms, conjoined with a careful examination of the state of the uterus, lead to the presumption of a correct diagnosis being formed in the generality of cases? For support of the latter position, I must again refer to the testimony of Dr. Blundell, who states, "that a finger or two may be inserted into the uterus at this time, and the absence of the fœtus easily ascertained," and which statement is well borne out by the following interesting case, kindly communicated to me by my friend Dr. Blundell.

A woman in the end of a reputed

* Vide Burns, who states, "we are justified in the highest degree in trusting to the powers of nature, rather than to the knife of the surgeon."

pregnancy was seized with symptoms of an incipient parturition, and Dr. B. was called in. On making examination, he gave it as his opinion that the womb did not contain a fœtus, for both the fundus and the mouth of the uterus could be felt, and the bulk of the organ, not exceeding that of two months, was obviously insufficient for the purpose.

A day or two afterwards, violent parturient efforts supervening, Dr. B. was summoned in all haste, with a hurried intimation that the child would probably be born before his arrival. Of course this intimation was accompanied by a smile and a sneer. On reaching the chamber, Dr. B. found the patient labouring under vehement uterine efforts; but on repeating the examination, the os uteri being open, he succeeded, without difficulty, in introducing the fore finger of the left hand into its cavity, and gently depressing the whole womb by the action of the right hand applied externally upon the fundus, he was enabled to touch the internal surface of the fundus with the tip of the finger already introduced, satisfying himself beyond a doubt that no fœtus was there. The size and situation of the womb being in this manner ascertained, together with the absence of an uterine ovum, the abdomen was further examined externally, when, behind the uterus, a large tumor of the size of a nine months' impregnation could be clearly distinguished. Further assistance from Dr. B. was declined; but the patient dying apparently from peritonitis, a *fine fœtus* of the size of nine months was found lodging externally to the uterus, and with its cyst forming the tumor.

The stethoscope has been frequently and successfully used in the detection of natural pregnancy; might it not also be employed to assist in forming a correct diagnosis in cases of extra-uterine gestation?

As to the danger of making incisions into the peritoneal sac, though not to be undervalued, yet surely it is not sufficient to set aside the operation, if we refer to the many successful cases of the Cæsarean operation, extirpation of the womb, of the spleen, and of the ovaries, strangulated hernia, &c., &c., as well as to Dr. Blundell's Experimental Enquiries, before alluded to; and we shall have proof sufficient, that the risk of fatal peritonitis from these incisions has been greatly exaggerated, and that it ought not to deter us from abdominal operations, when the urgency of the case seems to demand them.

The correctness of these inferences being granted, as founded upon the arguments advanced in support of our views relative to the expediency of an operation for the removal of the fœtus and appendages in cases of extra-uterine pregnancy arrived at or near the ninth month of gestation, the important question as to the period most eligible for the adoption of such operation presents itself in the next place for our consideration.

The answer to this question properly restricts itself to two periods: the first of which would be indicated by the symptoms of expulsion becoming manifest during the continuance, or immediately after the subsidence, of these symptoms; the second, commencing at the termination of the first period, renders the time of operation less definite, and altogether circumstantial. Let us examine what inducements we have for selecting one or the other of these periods. Now, as to the first, viz. that of the manifestation of the expulsive symptoms, &c. I think we may consider the advantages derivable, under three divisions.

1. *The chance of preserving the lives of both mother and child; the latter of which would be only possible at this period, while that of the former would be rendered more probable at this than at any subsequent time.*

That such is not only a tenable but a justifiable anticipation, cannot, I think, be better substantiated than by referring to the many analogous cases of abstraction of the fœtus by the Cæsarean section, which have been performed with a happy result. One example to this effect, of recent occurrence, will, it is hoped, serve as an ample illustration of the rationality of the principle. This case is recorded in Part III. of the British and Foreign Medical Review, edited by Drs. Forbes and Conolly, pp. 71, 72, 73.

The Cæsarean section was performed three several times on the same individual, by Dr. Michaelis, of Kiel. On the first operation a dead fœtus was ex-

tracted; under the two latter the lives of both children were saved, and the mother recovered and did well*.

2. *The constitutional powers are in a better condition for sustaining an operation, the constitutional irritation being less, and least to be dreaded at this period.*

No further argument need be adduced to support this position, than that the longer the case is protracted, the greater must be the risk of constitutional disturbance and consequent debility, and in the same ratio dangerous to the mother; and this would surely be a sufficient inducement to operate at as early a period as possible.

3. *By operating at such time the occurrence of intestinal ulceration would be obviated, a result not unusual as a concomitant of protracted gestation (extra-uterine.) This untoward event happened in the case under consideration.*

That this circumstance cannot occur for some time after the death of the child, will, I think, appear evident, when we consider the process which nature has to set up for its decomposition; and from analogy we can readily conceive such a condition to be replete with the most imminent danger: this risk, by operating early, would be avoided, and add another powerful auxiliary to the chance of preserving the mother's life.

Thus the intention would be to endeavour by an operation, as near the ninth month as possible, to save the lives both of the parent and her offspring; and although the death of the child might have previously taken place, still the life of the mother would be brought into a position more favourable for recovery.

Let us now consider the second period for operating, viz. that commencing shortly after the termination of the expulsive efforts, and which renders the time for so doing less determinable.

We must be guided by the urgency of the symptoms, and never lose sight of the advantages derivable from an operation, in even protracted cases, as proved in the present instance, where such an unfavourable event as ulceration of the intestine supervened, accompanied by considerable constitutional irritation; yet the patient's life was preserved, and she regained her wonted good health and faculties.

As to where an incision ought to be made, whether through the abdominal parietes or through the vagina, must depend entirely upon the locality of the fœtus; but in the majority of instances the former situation would be preferable, and I think justly so, because, in operating with a proper degree of care, the free peritoneal cavity might be avoided.

We know that the opposite surfaces of living tissues, more particularly those of a serous character, when brought into close contact in states of inflammation, are apt to become mutually adherent; and thus it is in extra-uterine pregnancy. The sac containing the fœtus occasions some degree of inflammation or irritation, which has the effect of causing lymph to be thrown out, and producing, in tubal and ovarian cases, adhesion between the peritoneum covering the sac, and that portion of it which is reflected over the abdominal parietes; and by the termination of the full period of gestation, the union between the two surfaces is generally complete to the extent of nearly the anterior half of the sac. But in ventral cases, the germ, being lodged in the cavity of the abdomen, separates the two layers of the peritoneum as far as its circumference, where they become united by means of lymph, which forms a boundary, and assists in supporting the proper membranes of the placenta, and in preventing the escape of the contents of the ovum into the free cavity of the abdomen.

In those cases where adhesion has taken place, that part of the abdominal parietes included between the superior and inferior boundaries of the sac need alone be divided; and I would recommend that an incision should first be made, large enough to admit the finger, at that part where fluctuation could be most distinctly felt, for the purpose of ascertaining the extent of the sac; and that the aperture be enlarged accordingly.

Thus, by not laying open the free cavity of the peritoneum, the risk (so much dreaded) of producing inflamma-

* For an excellent detail of this case see the journal just referred to.

tion of that membrane by the extravasation of blood, the effusion of other fluids, or the lodgment of any irritative matter, would be greatly diminished, and the objection raised by Sabatier, in his "Médecine Operatoire," as to the danger of extravasation of fluids, &c. into the cavity of the abdomen, would under such circumstances be obviated.

I have been asked how the placenta could be removed without incurring the risk of great hæmorrhage, there being no contractile power, as in the uterus, to close the mouths of the vessels, when the placenta is detached from the eavity of the sac in which it and the fœtus are contained?

I should here express my belief that the death of the fœtus takes place at, or very soon after, the period when the fruitless efforts at expulsion are made; so that the fœtus becomes an extraneous body, devoid of vitality. It may be presumed that the placenta, having no further functions to perform, soon loses its vitality and operates as an extraneous body too, and, on the well-known principle of the animal economy, in analogous instances, occasioning closure of the vessels at that part where the living surface comes into contact with the dead; and this state of things would necessarily preclude the danger to be dreaded from the occurrence of hæmorrhage: but, for the sake of argument, admitting the existence of a vital condition of the contents of the sac, after the separation of the ehild, this is my answer:—I would not extract the placenta immediately, but would leave it for a few days; when I confidently believe that the usual process of separation would be set up by nature in this case, as is exhibited in the removal of extraneous bodies from the system, or of parts that have become mortified; for, as before stated, the child being separated, and the placenta having no further function to perform, must necessarily lose its vitality and become an extraneous body.

Another question here suggests itself: might not leaving the placenta for a few days, or till its death supervened, in contact with a vital surface, be likely to lead to the same baneful results as occurred under Dr. Wm. Hunter's practice of leaving the placenta in the uterus, in order that nature might complete the process for its expulsion? The only answer I can, or think need give, to this interrogative, is by referring to what really occurred in the case under consideration, where not only the placenta, but likewise the child itself, were placed in this relation to the living organism, since both had been, at the time of their extraction, dead for nearly five months: still no untoward event or evil consequences resulted; nor yet are we prepared to say how far the analogy between the interior of the sac of an extra-uterine impregnation and of the uterus holds good; but I think we may conjecture, from the results observed in these two instances, that their physiological conditions are very different.

It may be well to observe, in dismissing this case, that the recovery of the patient, under abdominal injury so great, surely gives increased strength to the opinion that the abdomen will bear much, and that an abdominal surgery, cautious, yet more enlarged than the surgeons of the preceding century have ventured to exercise, might not be wholly unattended with success.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

The Works of John Hunter, F.R.S.; with Notes. Edited by JAMES F. PALMER. In 4 vols. 8vo. illustrated by a volume of Plates, in 4to. Vol. I. Longman and Co.

THE opening of the new College of Surgeons, and the approach of the annual oration consecrated to the fame of Hunter, are epochs happily chosen for the appearance of this work. It is, in fact, a monument to the genius of that master-spirit whose labours and whose creations it rceords, and can scarcely fail to be acceptable to the profession generally, but more particularly to that great mass of listeners who will shortly be congregated within the walls of the most splendid professional institution, and adjoining the most comprehensive and valuable physiological and pathological museum in Europe.

The first volume (the only one yet published) contains an original and well-written life of Hunter, in which the

unmeasured panegyrics, and the shameless detraction of preceding biographers, are alike avoided. This is followed by "Lectures on the Principles of Surgery," in correcting and preparing which great pains seem to have been taken to collate the best and most authentic MS. copies extant.

The work is altogether one which promises to confer an important service on the profession,—a service which will not be appreciated the less on account of the modest and unassuming manner in which the Editor speaks of himself and his labours.

We shall probably bring some of the most interesting parts of the work before our readers in some future numbers of the GAZETTE.

MEDICAL GAZETTE.

Saturday, February 11, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

POOR-LAW TRICKERY PRACTISED ON THE PROFESSION.

IF we have said nothing for some time past on the subject of the vile new Poor-Law and its abominable working, it has not been, heaven knows, for want of material to illustrate its nature, for daily and hourly the examples are multiplied of the mischiefs resulting to the community from this pernicious system; but we began to feel, we must confess, the hopelessness of opposition in a cause which so deeply concerns the welfare of the medical profession throughout the country, as well as that of the public at large, yet in which those who are actually so much interested exhibit themselves so lukewarm.

Since the publication of the excellent report of the committee appointed by the Provincial Association, there has been a dead silence; we have heard of no steps being taken, or proposed to be taken, in any quarter, to follow up the recommendations of the committee. Parliament is now assembled, yet not a stir seems to be even contemplated in any locality to get up petitions. The session, no doubt, will slip by, as many preceding ones have; and then, in the usual course of things, meetings will be held to complain of grievances, which, with a little more energy on the part of the complainants, might have been averted.

The members of the medical profession seem to be waiting on the will and pleasure of the public, thinking, doubtless, that the frightful examples of inhumanity constantly coming before them will ere long work an abolition of the law. But they miscalculate the effects of such stimulants, which only become weaker in their operation the more frequently they are administered.

What can be more horrifying than the instances every day brought under the recognizance of our magistrates, of wretched people of all ages starving to death, in a country which could hitherto so proudly boast of its provision for the poor? Unfortunate creatures, in the last state of destitution and disease, are hourly besieging the police offices for that relief which the magistrates can no longer order, and the parish overseers deny. Mothers are obliged to carry their dying children in their arms, making application to one overseer after another, and treated with unfeeling brutality by all, until at last the infants perish. A case of this kind is even now before us: a wretched couple, with a sick child, wishing to stop at Brentford, on their way from Croydon, were refused a bed in any of the lodging-houses, lest the baby should die, and thus become chargeable to the Union for its burial: the lodging-house keepers were warned on this point by

the overseers. The consequence was, that the child died in its mother's apron.

Nothing can in general surpass, in the way of cruelty and inhumanity, the conduct of the overseers, relieving officers, and all the functionaries connected with the new system: it would seem, indeed, as if there was something in the measure itself infectious, in this respect, for the *employés* no sooner get into office than they almost invariably become case-hardened, and lost to all sense of shame. There are but few exceptions.

This heartlessness and cruelty, however, are not the only characteristics of the new poor-law officers; their inhumanity and injustice are frequently combined with trickery and insult. In all their dealings, with medical practitioners especially, the Boards of Guardians have displayed a singular propensity for exercising an insulting tyranny: they have bullied and threatened, and have found, unfortunately, in too many instances, that they could thus succeed in carrying their point. That disgusting affair which was transacted at Somerset-house a few months ago, when a poor-law medical officer was thrown overboard as a tub to the whale, to mitigate the public indignation, then at its height, should serve as a warning to all practitioners unhappily tempted to enter their service. But we were not prepared for the gross amount of trickery which the Poor-Law functionaries do not think it amiss sometimes to practise, until we met with a striking instance in a provincial paper. It would seem that wherever the system is introduced, not only, as we have said, are officers procurable endowed, or speedily endowable, with the requisite want of feeling, but these persons soon show that they are everywhere actuated by the same spirit precisely: a Board of Guardians in the remotest corner of Somersetshire is a physical and moral miniature of the Board in Somerset House; and every little knot of functionaries, however small, has its Chadwick to regulate its proceedings. The same jesuitry and disposition to overreach those who too candidly confide in its deceptive promises, are everywhere observable.

The case to which we more immediately allude is one which has lately occurred near Castle Cary, in the Wincanton Union. On the 6th October last, a carter in the service of the Rev. H. F. Yeatman fell from a waggon and broke his thigh. Mr. Knight, a surgeon, being on the spot, was requested by the overseer of Ashford (to which place the patient was conveyed "for convenience," after a lapse of two hours, during which time he lay in an exhausted state in the open highway) to attend the case. The medical man apparently knowing the sort of people he had to deal with, desired the overseer to apply to the relieving officer for information as to the course to be pursued; whether a union doctor was to be supplied, or he, Mr. Knight, to be recognized as having charge of the case. The answer was, that no decided arrangement could be made before the next meeting of Guardians, when the matter would be laid before them: but that in the meantime Mr. Knight was to see that the man was provided with "what might be required."

The Chairman of the Board was also apprized of the facts of the case, when he wrote a letter to his friend, Mr. Yeatman, to the following effect:—"I am sorry to hear that your carter has met with so severe an accident. The case shall be duly attended to by our Board to-morrow" (observe, this was on the 11th October, five days after the accident), "when your letter, and the letter of Mr. Knight, the surgeon, shall be read by the clerk. As the accident

happened at Pitcombe, where Mr. Gatehouse, of Bruton, is the medical man, it is fair that Mr. Knight should have some remuneration for his professional services."

But what happens when the Board meets at length, six days after the accident? Why, that no order is made either to direct the medical man of the union to visit the patient, or to discontinue Mr. Knight's services. The relieving officer, indeed, paid him one visit during his illness, and the allowance of half-a-crown and a loaf of bread was granted weekly. No arrangement was made, further than has been already mentioned, respecting medical attendance; so that Mr. Knight conceived himself in possession of the case with the full sanction of the Board. But what was his surprise when, upon the cure being completed, and a bill delivered in, amounting to no more than six guineas for his six weeks' attendance, he found that no notice was taken of his application; but at the end of a month a letter was officially written to Mr. Yeatman in these terms, in which one knows not which to admire most, the dishonesty of principle, or the sneering malignity which they display: —"The Board cannot recognize any charge made by Mr. Knight" — "but while they are resolved on this, they are also resolved never to deprive any gentleman of the opportunity of providing medical care and skill for a long-tried and faithful servant, should he have the misfortune of becoming a casual pauper within their union." *Misfortune*, indeed, for any pauper! But what shall we say to the palpable trickery here practised, of refusing a just demand for services which were in the first instance engaged—hired, by one of the overseers, and then continued with the more than tacit sanction of the Board?

The ground on which these worthy Guardians of the Poor say they cannot recognize Mr. Knight's claim is, that "by so doing they would introduce a most dangerous precedent." A dangerous precedent to abide by the terms of their contract!—for a contract it was, to all intents and purposes—*morally* at all events, if not legally; and Mr. Yeatman, in a letter to the Editor of the Dorset Chronicle, cites a strong case in point, wherein it was decided by Lord Ellenborough, that a parish officer who did not repudiate the attendance of a medical man situated like Mr. Knight, in effect commanded it.

The issue of the affair may be easily conjectured. The Board, of course, did not alter their resolution; and it only remained for the Rev. Mr. Yeatman, if he thought proper, to pay Mr. Knight for his services to the parish pauper. The money was generously paid, at the same time that the hardship of the case has been laid before the public.

Whatever may be the general destiny of this odious and disgraceful Act, its medical merits, we trust, will be put to the test ere long. There is every probability that a parliamentary committee will be appointed in the course of the present month, to inquire into the actual state of medical attendance on the country poor, when we hope that all practitioners who have been witnesses of the iniquitous working of the system, will be prepared to come forward and give their testimony.

PRICE CURRENT OF DRUGS.

In our last number but one we gave a tabular view of drugs on sale in the English market, with their several prices and duties annexed. We wish to say, in reply to several inquiries, that it is our intention to give a similar table in the number for the last week in each month. Thus our subscribers in distant parts of the country, and abroad, will be regularly supplied with a species of information which we have reason to believe they must have long felt as a desideratum.

HUNTERIAN MANUSCRIPTS.

NOTE FROM SIR B. BRODIE.

To the Editor of the Medical Gazette.

Sir,

I have just been informed that, in a weekly medical publication, which I am not in the habit of reading, it has been lately insinuated that I was in some way or another privy to the burning of Mr. Hunter's papers by the late Sir Everard Home.

I take the liberty of stating to the public, through the medium of your journal, and in the most unequivocal manner, that this is wholly and absolutely false. I knew nothing whatever of the transaction until I was made acquainted with it by vulgar report.—I am, sir,

Your obedient servant,

B. C. Brodie.

14, Saville Row,
Feb. 9, 1837.

[Since the above was received, the Lancet of this day has come to hand, in which the same dastardly insinuation is reiterated. The motive which leads the anonymous scoundrel by whom the articles in question are written to choose the present moment for inventing this slander, is too obvious to require any remark.—Ed. Gaz.]

REPORT ON THE

LOWER EXTREMITIES OF A HUMAN BODY,

FOUND

UNDER MYSTERIOUS CIRCUMSTANCES;

With Remarks.

By G. F. Girdwood, Esq.

[As some labourers were at work in an osier field, close by Cold-harbour-lane, Camberwell, one day last week, they found a large parcel wrapped in sacking; and on opening it, discovered the legs of a human being. The police immediately instituted inquiries, and a Coroner's inquest was held on the limbs at Brixton. The result was, that they were identified as belonging, beyond question, to the trunk found some time since in the Edgware Road. Mr. Girdwood read the following report at the inquest, and has been good enough to forward it to us in a corrected form, thus enabling us to preserve in our pages an authentic account of the three several *pièces de conviction*.—Ed. Gaz.]

Decomposition has hardly begun. The complete draining of the blood and other fluids from the cut surfaces of the thighs has prevented the formation of red lines along the course of the blood-vessels, so usual as the incipient marks of putrefaction. The cuticle only is removed at those places where the limbs have been in contact with the bag, and a slight moisture bedews the surface where it is so denuded.

The contour of the leg is round, plump, and fleshy; the thigh is full, the knee well formed, and somewhat approximating its fellow; the ankle and foot are well shaped, the plantar arch well turned, the instep high, the toes very regular, except the second on the right foot, which rides a little over the great toe. Altogether, in its general character, it may be said to be a handsomely-proportioned female limb.

On the shin of the left leg there is a blueish red mark, about the size of the hand, which, with a small dark spot, the size of a fourpence, on the calf of the other, are the only discolorations on the surface, except some dirt on the upper parts of the thighs, and stains on the feet and legs of a purple dye, such as are seen on the legs of those who are in the habit of wearing black stockings.

There is a gash, about two inches long, under the knee inside, on the right leg, but which merely separates the skin and cellular membrane underneath. The surface around it is not ecchymosed.

The thigh bone on the right side is, from where it is sawn across, denuded some way down; the flesh is wanting, and appears to have been eaten away.

There is a circular mark of pressure under each knee, such as is seen on those who wear their garters there.

The length of the foot is ten inches and a quarter, the circumference at the broadest part of the left foot is eight inches and three-quarters, that of the right is half an inch more. The circumference of the calf, at its thickest part, is thirteen inches and a half. The length of the whole limb, taken from the sawn extremity of the thigh bone to a plane rested on by the sole of the

foot, is ascertained to be thirty-two inches and a half. The section of the bone in both limbs has been made so alike near to the hip joint, that the nicest examination cannot detect the difference of the eighth part of an inch in the length of either limb.

The upper portions of the thigh bones which were removed from the trunk of the female body found six weeks ago at the Pine Apple Gate, and kept in my possession since, being placed, the left portion to the left femur, and the right to the right, they were found to correspond exactly in all the irregularities of their half-sawn, half-broken surfaces.

The cloth in which the limbs were found wrapped up is ascertained to be the lower half of a grain sack, on which are painted in red the following letters: SELEY (on one side) : RWELL (on the other) The sack has been apparently used latterly for other purposes than those for which it was at first employed. It is smeared on what has originally been the outside, with paint, principally white, but it has been turned outside in, the surface having the letters on it being that which was inside when discovered with the limbs. In one of the corners was found about half a handful of common deal shavings. The mouth of the sack was tied round with a piece of thick cord, such as is used to tighten bed-sacking, and at intervals along the rope might be seen parts worn, and permanently bent, so as to have a knuckled appearance, as if it had been long kept in a zig-zag direction.

Remarks.—This third inquiry completes what was left wanting by the two former reports. The legs now discovered in Cold-harbour-lane, and the trunk found at Paddington, and the head taken from the canal at Stepney, are proved to form together an entire human body—that of a female.

We now ascertain her exact stature: an inch and a half is to be added to the ascertained length of the leg, so as to bring the measurement up to the plane of the symphysis pubis. We have thus 34 to add to 33 inches. An inch may be deducted with propriety, to allow for the elongation after death of the vertebral column; and thus we find the height of the female to be 5 feet 6 inches.

The opinion expressed on a former occasion, of the occupation of the agent, or it may be of an accomplice, or the assassin himself, has received strong confirmation by the present inquiry. In addition to the lines, and cloths, and shavings, formerly noticed, we have now again the trade of a carpenter denoted by the bed-line, the shavings, and the bag smeared with different sorts of paint.

It is possible that the head may have been thrown into the canal in this neighbourhood, and, the hair having become entangled on some hook or nail, been conveyed by a barge to Stepney; but not very probable. Most likely it was thrown in there.

It might almost be considered that some plan was arranged to place the different portions of the body as far as possible apart: certainly, had the Map of London been taken as a guide, and three equidistant points dotted off in the suburbs, none could have corresponded to the angles of an equilateral triangle more exactly than the three different places we have mentioned. The three points are full seven miles from each other: twenty-one miles must therefore have been traversed. This circumstance, with the weight to be carried, would imply that some mode of conveyance had been used; and this, again, would lead one to the conclusion that more than one person had been employed in the matter.

G. F. G.

148, Edgeware-Road,
Feb. 8, 1837.

ROYAL INSTITUTION.

Friday, Feb. 3, 1837.

Dr. Grant on the Glandular System in the various classes of Animals.

The subject chosen by Dr. Grant for the lecture of this evening possessed much novelty and attraction. It comprehended a view of the glandular system as developed throughout the various classes of animals, from the lowest to the highest. But the lecturer judiciously confined himself chiefly to the glands concerned in digestion; he first noticed in a general way the functions of those other glands employed in secreting tears, serous fluid, poisons, &c., and then proceeded to a special description of the organs in the lower animals engaged in the function of nutrition. Dr. Grant proved that all animated beings had a liver, or at least the rudiments of that most important gland. In the simplest form of animal, which seemed to be nothing more than a digesting sac,

the liver existed as a mere follicle. In the monas termo, hydra, and other infusoria, those numerous stomachs, some of which admitted indigo, and others vermilion and other pigments, are nothing but so many follicles, in which glandular functions subservient to nutrition are performed. The higher we proceed in the scale of animals, the more complicated those stomachs or follicles are observed to become; and what is commonly called a gland is only a combination of follicles. In the lower animals the glandular apparatus, which is essentially liver, is immediately connected with the digestive tube. Among the higher it is only mediately connected, and opens into the alimentary canal by a duct. This is a necessary provision for animals which have to endure long fasts, or have not their food always before them; and hence the reservoir for the secretion of bile, in the carnivora and man, for example. In the human species, which possesses the liver in its highest state of perfection, the organ attains its ultimate condition by passing through a number of phases, from the simple form which it exhibits in the embryo to that observed in the adult man; and all these phases are analogous to conditions found to exist in lower and less perfect animals.

That the brain of the fœtus undergoes successive changes, being at one time that of a tadpole, at another that of a fish—again that of a crocodile, and so forth; and that in like manner the heart of the human fœtus is at first a simple tube, then a cavity, then two cavities, and lastly an organ containing four, resembling in the successive stages the heart of mollusca, fishes, reptiles, &c., are facts familiarly known. But the announcement made by the lecturer to-night respecting the liver, came upon his hearers with considerable novelty. In the human embryo, the first appearance of any thing indicative of the future liver is a mere thickening of the intestine at a particular spot; that thickening then becomes more and more defined, is found to be follicular, glandular, lobular, and at length apart from the alimentary canal, to which it is connected merely by a duct.

Dr. Grant, towards the conclusion of the lecture, gave a short notice of Mr. Kiernan's researches, and endeavoured to show that the consideration of the complex structure of the liver was involved in that of the hepatic duct simply. This duct, he said, was essentially the liver; as, indeed, in every instance the duct is the gland—its ramifications and complications being unessential to its nature.

In conclusion, Dr. Grant gave a sketch of the formation of glands from the *blastema*, and took a rapid view of the structure of the skin, pointing out the immensity of follicles and glands of which it is composed.

The whole was illustrated with a profusion of diagrams and drawings, which were referred to and removed with the utmost rapidity. It occurred to us more than once during the lecture, and we are sure others must have thought as we did, that it would have been far better—less bewildering, at all events—if Dr. Grant had made a selection of his illustrations, and only presented those to the audience which were necessary to elucidate his subject.

DEATH BY ASPHYXIA;

FROM INHALING THE FUMES OF CHARCOAL.

(*Extract of a Letter.*)

I HAVE copied out, and take the liberty of sending you, the details of a case, indisputably authentic, as it is grounded on the *procès verbal* made out by the Commissaire de Police of the Quartier, who was the first to enter the premises of the deceased. It is almost like a voice from the grave of one who relates his passage through the gates of death, and, as a case of physical experience, is highly curious.

On breaking open the door of his bedroom, Deal was found sitting in a chair, in the attitude of one asleep; his head reclined on a table before him, on which were also placed a watch, an inkstand, a lamp, a candle (extinguished), and at his feet a pen, which seemed to have dropped from his hand. Two large tubs, which contained a quantity of cinders and some half-consumed charcoal, were in the room, every aperture to which was carefully stopped up. On raising up the corpse of Deal, a paper was discovered, on which the wretched man had described, minute after minute, the gradual progress of his lingering agony.

He begins first by an explanation of his religious tenets; and adds, that he has taken every precaution that his death may produce no sort of embarrassment to his friends. He then goes on to say, that he had conceived it might be useful to the interests of science that the effect of charcoal in producing death might be properly ascertained, and he was further actuated by a wish to prove that his suicide was an act of sane and premeditated intention. I now give you his own words:—

"J'ai été derangé plusieurs fois. Au Diable les importuns! ils ne peuvent même pas laisser mourir les gens tranquillement. C'est égal! J'allume mes fourneaux, et place sur la table ma lampe, et ma chandelle, ainsi que ma montre, et je commence aussi la cérémonie.—Il est

dix heures quinze minutes. Les charbons s'allument difficilement ; j'ai, cependant, mis sur chacun des fourneaux un tuyau, qui doit aider l'action du feu.

" Dix heures vingt minutes.—Les tuyaux tombent, je les relève; cela ne va pas à mon idée. Ils retombent encore ; je les replace de nouveau. Cela va mieux. Le pouls est calme, et ne bat pas plus qu'à l'ordinaire.

" Dix heures trente minutes.—Une vapeur epaisse se repand peu à peu dans la chambre. Ma chandelle paroit prête à s'eteindre; la lampe va mieux. Je commence à avoir un violent mal de tête ; mes yeux se remplissent de larmes ; je ressens un malaise général ; j'eprouve quelque soulagement, à me broucher le nez avec un mouchoir. Le pouls est agité.

" Dix heures quarante minutes.—Ma chandelle est éteinte, la lampe brule. Les tempes me battent comme si les veines vouloient se rompre. J'ai envie de dormir. Je souffre horriblement de l'estomac. Le pouls donne quatre-vingt pulsations dans une minute.

" Dix heures cinquante minutes.—J'étouffe ! Des idées étranges se presentent à mon esprit. Je puis à peine respirer. Je n'irai pas loin. J'ai des symptomes de folie."

(Here he confounds the hours with the minutes.)

" Dix heures soixante minutes.—Je ne puis presque plus écrire ; ma vue se trouble. Ma lampe s'éteint ; je ne croyais qu'on dut autant souffrir pour mourir.

" Dix heures soixante deux minutes." (Here are some illegible characters traced, and it is probable that, with the last gleam of his lamp, the life of the wretched man was extinguished *.)

FLAGELLATION IN CASES OF POISONING.

[A CORRESPONDENT, a professor in one of our medical schools, has directed our attention to the following case in the third volume of the Medical Repository, published in New York in 1800, which was communicated by Dr. Valentine Seaman, of that city. It will be perceived that the treatment was similar to that used in Dr. Barratt's case, published in No. 13 of the [Dublin] Medical Journal, although we have no doubt that the idea was original with Dr. B.* The following is the substance of the case referred to, which is published merely as an additional proof of the value of the remedy so successfully used by Dr. Barratt.] "The wife of —— Head, in Water-street, had about two hours before swallowed ℥j. laudanum, and then lay in a deadly stupor, from which all the efforts of her friends could not awaken her. Attempts had been made to get some vinegar into her stomach, with little effect; nor did I (says Dr. S.) succeed much better in endeavouring to give a dose of white vitriol. I then procured a small switch, and applied it pretty freely to her arms and shoulders, which were defended only by a thin covering. I also applied some strokes to her legs. In the course of a short time, indeed almost immediately upon the application of the remedy, she roused up, and begged me to desist. She continued for a time much confused, with involuntary turns of laughter. Two scruples of white vitriol were then administered, followed in about fifteen minutes by ℥ss. ipecacuanha; notwithstanding which, and having tickled her throat repeatedly with an oiled feather, it was nearly an hour before she could be made to puke; however, finally she did puke, and by the assistance of frequent draughts of warm water, her stomach was pretty thoroughly evacuated. By the assistance of her friends she was kept awake, or, at least, slept but little at a time, during the night, and this [next] morning appears entirely recovered."—*Boston Journal ;* and *Dublin Journal of Med. Science*, Jan. 1837.

* Times, Jan. 31, 1837.

† See the case alluded to in Professor Graves' 4th Clinical Lecture, MEDICAL GAZETTE, present volume, p. 663.

PORTRAIT OF HUNTER.

HUNTER'S friends had long been desirous to engage him to sit to Sir J. Reynolds for his picture; but he had always hitherto declined to do so, not choosing that it should be done at the expense of others, and thinking the price too high for himself to pay. He was, however, at length induced to comply, chiefly to oblige Sharp, the eminent engraver, who had received much notice from Hunter, and was very anxious to be permitted to make an engraving from Sir Joshua's picture. Reynolds found Hunter a bad sitter, and had not been able to satisfy himself with the likeness, when one day, after the picture was far advanced, Hunter fell into a train of thought, in the attitude in which he is represented in the present portrait: Reynolds, without saying a word, turned the canvas upside down, made a fresh sketch, with the head between the legs of the former figure, and so proceeded to lay on over the former painting the colours of that which now graces the walls of the library at the College of Surgeons. From this portrait Sharp executed his engraving, which is admitted by the best judges to be one of the finest, if not the very finest, specimen of the art ever executed.—*Life, in new edition of Hunter's Works.*

TREATMENT OF INFLAMMATION.

CHALLENGE TO INVESTIGATOR.

To the Editor of the Medical Gazette.

SIR,

SINCE Investigator treats the reply I have made to his censures upon the system of treatment I adopt for inflammatory diseases as mere idle words, I will, with your permission, propose to him, that he should sink all the idle words between us, and come to facts. If Investigator's real object is to arrive at truth, and not to cavil, he will with me embrace the opportunity which the present season affords us of comparing the respective results of our treatment of cases which are sufficiently similar, if confined to those of the prevailing epidemic. Such a comparison, I should think, cannot fail to produce a fair conclusion as to which of our opposite systems of treatment is the more correct, for they cannot both be right. It would save you, Mr. Editor, unnecessary trouble, if Investigator would drop me a line, by post, stating the day he would send his communication, authenticated by his name and address, to your office; mine should be forwarded on the same day, so that they might both appear in the same GAZETTE. This would be the fairest plan; after which there need be no further discussion between us on the subject.—I remain, sir, yours, &c.

H. SEARLE.

Queen's-Place, Kennington, Feb. 6, 1837.

THE LATE DR. LEY.

WE regret to have to record the decease of Dr. Hugh Ley, physician-accoucheur to Middlesex Hospital, and lecturer on midwifery at St. Bartholomew's. He had suffered from rheumatic fever many years ago, and had latterly been frequently subject to rheumatic inflammation of the limbs, with pain and swelling, though not usually so bad as to confine him to bed. The heart had been damaged in one of the early attacks, and progressively became hypertrophied, attended with so much palpitation and distress as to render it difficult for him to attend to business. For some months before his death, the symptoms had been gradually getting worse, but he had recovered a little, and gone down to the house of his father-in-law, Major Kelly, near Stilton, in the hope of farther improvement: here, however, he suffered a relapse, which carried him off on the 24th of last month.

Dr. Ley was a man of skill and talent, well informed in his profession, and having a very remarkable command of language; indeed he was one of the most fluent lecturers and public speakers we ever met with. His professional reputation was without blemish, and his sentiments, on all subjects, were those of a gentleman.

COLLEGE OF SURGEONS.

THE Hunterian oration will be delivered by Sir B. C. Brodie, Bart., at five o'clock in the afternoon of Tuesday next.

The museum will be opened, to the members only, for that day, and on the 1st of March to the members and the public generally.

The library of the new building, it is announced, will be thrown open on the 15th of February (the day after the Hunterian oration) to members and visitors, as usual. A reading-room, for members only, is to be open from 7 until 10 o'clock in the evening, on Mondays, Wednesdays, and Thursdays.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

February 9, 1837.

William Dalla Husband, York.
Thomas Johnson, Manchester.
James Edward Newall, Aberystwyth.
Henry Laxton, Bristol.
William Cheesewright, Bristol.
James Stephens, Manchester.
Edwin Chabot, Lambeth.
Charles James Jump, Wisbeach.
James Parkerson, East Dereham.
Henry Lacy Pomfret, Manchester.
Richard Baker Bellyse, Audlem, Cheshire.
Thomas Mark Hovell.
John Gilby, Alford, Lincolnshire.
George Kinghorn Prince, Jamaica.
Alfred Baker, Birmingham.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 7, 1837.

Age and Debility	113	Bowels & Stomach	6
Apoplexy	5	Brain	2
Asthma	62	Lungs and Pleura	19
Cancer	1	Influenza	63
Childbirth	4	Insanity	3
Consumption	86	Liver, diseased	3
Convulsions	37	Measles	10
Croup	6	Miscarriage	1
Dentition or Teething	12	Mortification	5
Dropsy	17	Paralysis	3
Dropsy in the Brain	9	Rheumatism	1
Dropsy on the Chest	1	Small-pox	2
Erysipelas	1	Sore Throat and Quinsey	2
Fever	9	Spasms	1
Fever, Scarlet	1	Thrush	1
Fever, Typhus	6	Venereal	1
Heart, diseased	4	Unknown Causes	2
Hernia	1		
Hooping Cough	14	Casualties	2
Inflammation	82		

Decrease of Burials, as compared with the preceding week . . 262

ERRATA.—In Mr. Hird's paper in last number, p. 702, l. 12, *for* "abdominal artery," *read* "abdominal aorta;" l. 34, *for* "subclavians," *read* "subclavian;" p. 703, l. 27, *to* "cutting edge of the knife," *add* "directed downwards."

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THE

LONDON MEDICAL GAZETTE,

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OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 18, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XXI.

Infanticide *continued. The hydrostatic lung-test—Its origin not ancient—Controversies to which it has given rise—Haller's testimony to its worth—Dr. W. Hunter's objections—Mode of applying the hydrostatic test—Swimming of the lungs, how far a proof of respiration—Objections answered—Mode of distinguishing between the effects of inflation and respiration—Sinking of the lungs, how far an indication of still-birth—Objections answered—Live-birth without respiration—Modifications of the hydrostatic test—Daniel's—Bernt's—Proofs of respiration from the state of the circulatory apparatus—State of the ductus arteriosus (the Vienna test)—Foramen ovale—Ductus venosus—Whether a test may be founded on the state of the liver?—Conclusions respecting the validity of the several tests.*

I concluded the last lecture with an account of the static lung test, and showed in what manner it was defeetive. Like most of the tests for determining the question of respiration, it deserves to have but little reliance placed upon it *per se*, but in combination with others it is often capable of giving consistency to the whole, and of contributing a certain portion of probable evidence for or against the fact in question; for which reason it ought never to be neglected in investigations concerning child murder.

We shall now proceed to consider the fifth point to be attended to in examining the lungs of new-born children.

The specific gravity of the lungs. — The lungs of still-born children are dense, specifically heavier than water, and therefore sink in that fluid; those of infants born alive, are of a less specific gravity, in consequence of the admission of air, and will float in water. This distinction forms the essence of

The Hydrostatic Lung Test.

History.—This famous test was first proposed towards the latter part of the seventeenth century. There is no reason to believe that any one was previously acquainted with it, though Galen has been erroneously asserted by some to have had some knowledge of it.

Galen knew nothing about it. It is true he notices the change of colour effected in the lungs of the mature fœtus; but he does not suggest even this as a means of distinguishing between live and still birth. It were indeed impossible that he could, for he laboured under the most grievous error as to the nature of the change: he considered it not as the consequenee of, but *preparatory to*, respiration. According to the great Pergamenian, when the fœtus is mature, nature cuts off the supply of red blood to the lungs, and hence, from being of a dark colour and heavy, they become whitish and light,—an admirable provision for their future functions; for as they are to be in a constant state of motion during life, they would be very ill adapted for the purpose, were they to remain like *other flesh*: hence they are supplied with nothing but air, and a very small quantity of thin blood!*.

Nor did Harvey know any thing about the hydrostatic lung test. He has the merit, however, of being probably the first who proposed a test of respiration; for he has hinted that the difference of colour

* Galeni Opera Omnia; Περι χρειας των εν ανθρωπου μοριων. λογος ιε. Tom. i. p. 534. Ed. Basil, 1538.

observed after birth might be made a means of distinguishing whether the fœtus ever respired or not. I have already pointed out the passage in his work, *De Generatione Animalium*, in which this idea is broached *.

Bartholinus, in 1663, stated the simple fact that the lungs of the still-born are found to sink in water, while those of children that have breathed float. But it was Swammerdam, in 1667, who first explained the phenomenon.

Karl Rayger, however, is distinctly entitled to the honour of being the original proposer of the test. Writing in 1677, in the *Miscellanea Naturæ Curiosorum*, he says, "we have in the swimming of the lungs a proof of the child having survived birth; and in their sinking in water, evidence of still-birth: whence we have the means of convicting the murderess, and of arriving at the truth."

About five years afterwards, Dr. John Schreyer, Physikus at Zeitz, is said to have actually employed the test in a medico-legal case; and already, in the years 1683 and 1684, we find several of the medical faculties in Germany recognizing the hydrostatic test, and ascribing all the credit of it to Rayger and Schreyer.

But opposition was of course to be expected; and, accordingly, we find several able adversaries entering the lists, to shew the insufficiency and the fallacy of the new method of proof. Zeller and Bohn were among the foremost of these. The former chiefly addressed himself to the sinking of the lungs, which he said did not always indicate that the infant was born dead. He mentioned, that he had tried the experiment with the lungs of a lamb which had lived half an hour, and found that they sank. He also stated other experiments, and quoted a case in which the lungs of a child sank, although the grandmother and mother, *on the torture*, declared that the child had cried after birth, when it was put into a vessel of water!

Bohn was the sturdiest, as well as the soundest, of the early opponents of the lung test. He put the question,—whether the lungs of a child which breathed after birth always float, and whether this floating be a sure sign that the child was live-born? The reply, he insisted, should be in the negative; because the lungs of a dead-born infant might, by artificial inflation, be made to swim in water; because further, air might, during birth, make its way into the mouth and lungs of the child; and finally, because putrefaction might render the experiment uncertain. He then proposed a second question,—whether the sinking of the lungs proved that the child was dead before birth? To this also he replied in the negative; because the child might have been born alive, though it did not immediately breathe; and there are cases in which, though the entire lungs sink, a portion of them will float.

The sophistry of some of Bohn's reasons will hereafter be seen, when we come to consider the objections to the test systematically; but they had their weight when first advanced, and already some of the faculties began to be shaken. The Leipzig faculty, indeed, as early as 1693, pronounced the prudent and cautious decision, "that the swimming of the lungs in water was not always a proof conclusive of the child having been born alive."

Some idea may be formed of the fruitfulness of the hydrostatic lung test as a subject of controversy during the greater portion of the eighteenth century, from the fact that C. F. Daniel, the younger, in a dissertation published in 1780, states the opinions of no less than 107 authorities, who had treated of the proofs of live and still birth up to that year. To enumerate more than a few of these, would be to occupy time that might be better employed. It may be stated, however, that Teichmeyer and Alberti were among those who contributed most signally to the adjustment of the true value of the hydrostatic test. The former confesses that there are cases in which this lung test is not applicable; in which, consequently, the medical jurist can be of little avail, and the result of the inquiry must be left to the legal faculty altogether. Alberti, also, in his excellent dissertation "De pulmonum subsidentium experimenti prudenti applicatione; Halæ, 1728," did much towards reducing the proofs of live and still birth to their proper value.

Both Morgagni and Haller recognized the hydrostatic test as capable of affording satisfactory evidence, when managed with suitable caution and discrimination. As early as 1758 we find Haller experimenting on the effects of putrefaction in modifying the results of the test. He shewed that a moderate degree of putrefaction did not prevent the sinking of the lungs of the still-born, but that when more completely decomposed they would certainly float: he advised, therefore, for the sake of security, that other parts of the infant should be immersed in water, when, if they swam, the lungs, it might be concluded, swam also through putridity, and not from air introduced by the process of respiration.

It is important to know what was the final opinion of the great Haller on the hydrostatic test: I shall quote it from his "Opus quinquaginta annorum," the edi-

* Lecture I. p. 4, *ante*.

tion of his Physiology on which he laboured till his latest hour. After mentioning that the lungs of birds are not speedily so affected by respiration as to become specifically lighter than water, he says—"But in regard to man, and animals resembling him in structure, a proof which may be safely relied on may be deduced from this phenomenon, showing whether an infant has been born alive and has breathed, or whether it was still-born. We may be sure that a child has survived birth when the lungs float in water; nor can there be any fallacy, unless there has either been artificial inflation, or putridity to a sufficient extent to render the specific gravity of the lungs less than that of water. A small amount of putridity will not effect this, but a considerable degree will. It is in this way that I reconcile the apparently contradictory experiments of distinguished observers. I have myself seen the lungs sink, after they had been for some months in the body of a fœtus buried in a privy; and it was the means of saving the accused. When putridity has attained its utmost extent, and every gas has completely escaped, the residue again sinks. Nor shall the medical examiner even then give an erroneous opinion, if, when he sees the lungs float in consequence of supposed putridity, he simply take the trouble of observing whether the other viscera swim also. If he find this to be the case, he may conclude that the lungs float, not through air naturally respired, but through gases generated from the tissues, and which may be seen forming themselves in bubbles over the whole surface of the lungs as well as of the fœtal body *."

And in the Addenda, published with the 8th volume of the Elementa Physiologiæ, we find the question thus concisely disposed of:—"The result of all the experiments and observations which have been made on the subject amounts to this—1. That the lungs of a child that has not breathed will sink—unless they be affected with a considerable degree of putridity; and 2. That lungs which once inspired atmospheric air, will swim in water—unless the inspiration have been very imperfect, or some manifest disease have rendered the pulmonary tissue dense."

I have been thus particular in stating Haller's opinions, because they may be considered as representing, if not giving the tone to, those of all the other great authorities of the continent. The hydrostatic test, it will thus be seen, was thoroughly understood in Germany, and a proper estimate entertained of its value, long previous to the publication of Hunter's tract in this country.

It is difficult to say what was the amount of information which was afloat at this time among practitioners in England, with respect to the proofs of infanticide; but there is reason to believe that there were vague notions of the hydrostatic test to be met with, and that much mischief was done by persons undertaking the application of it without any proper regard to its nature and objects. It was this that gave occasion to Dr. Hunter, in the last year of his life, to draw up a paper on what he called the "Uncertainty of the Signs of Child-murder," but in which his chief object seems to have been, to shew the uncertainty of the hydrostatic test as a proof of respiration. The avowed purpose of the paper was "to save the lives of unfortunate women" who might be exposed to the hazard of capital conviction on insufficient evidence; and never was a superficial sophistical composition attended with more success. Dr. Hunter was very imperfectly acquainted with the nature of the test which he attacked, and has fallen into several errors in the few pages which he devotes to a pretended examination of its merits; yet there was no one to answer him: his authority was all in all in those days; and the paper in question, which was not published till after his death, was looked upon as a sort of last legacy to his countrymen. As such, it has been always received in this country with marked respect; and, being written in a very popular and plausible strain, it has secured for itself almost the rank of a classic with certain of the older members of the bench and bar. No medical man can safely enter the witness box, on a trial for infanticide, without being acquainted with the "celebrated tract of Dr. W. Hunter;" nor need he attempt to appear for the prosecution unless he be able to meet Dr. Hunter's objections.

With a view of laying the case fairly before medical practitioners, and of enabling them to comprehend its intricacies familiarly, I was lately induced to publish a little manual, to which I would beg to direct your attention. It contains the whole of Dr. Hunter's paper, with such observations appended as I thought were necessary to expose and remedy its weak points; and subjoined you will find a summary of the proofs of infanticide, brought up to the present state of medico-legal knowledge*.

In the subsequent remarks on the hydrostatic test, it will rarely if at all be

* De Corporis Humani fabrica et functionibus; tom. vii. p. 88, ed. Bern. 1778.

* The Proofs of Infanticide considered. London, 1836. Longman and Co.

necessary to refer to Dr. Hunter. All his objections, however (though I should not call them his, for they were proposed by others some eighty or ninety years earlier), are fully considered, and the various bearings of the subject are contemplated to an extent of which he seems to have had scarcely any idea.

Let me give you one short caution ere we proceed. Do not suppose, as many have hastily done, that the hydrostatic test is a test of *infanticide;* it is only a test of *respiration:* the question of infanticide must be determined by ulterior considerations. There are many cases of alleged infanticide, in which the hydrostatic test is capable of affording no light; but, on the other hand, there are many in which it is fully adequate to decide the essential preliminary point—whether the infant *breathed;* for this is the sign of life which is in general required on trials for child-murder.

Mode of applying the hydrostatic lung test.—In order to apply this test properly, we ought to have a vessel (such as a glass jar) of sufficient capacity to contain both the lungs and heart, and to suffer them freely to float or sink, according to circumstances. Pure river or rain water should be used, and its temperature should neither be too low nor too high—say 60° Fahr. The vessel being nearly full, let the lungs and heart and the thymus be removed from the chest (taking care previously to tie the large blood-vessels), and let the whole be placed in the water together.

We should then observe whether the parts, thus collectively, swim or sink. If the latter, whether they reach the bottom quickly or slowly. The lungs may then be separated from the heart, and tried one after the other, as to their tendency to sink or remain buoyant. They may next be cut in pieces, and examined in detail as to their gravitating properties; and ultimately the fragments may be pressed so as to expel the air as completely as possible.

The general conclusions deducible from the hydrostatic test, are, 1st, that if the lungs swim, the infant breathed, or was born alive; 2dly, that if they sink, the infant did not breathe—it was still-born.

(A.) *Swimming of the Lungs.*

If the lungs, wholly or in part, swim, the inference is, that respiration to some extent, more or less, has taken place; but there are certain doubts or objections which may be raised, and are to be removed, before our absolute decision is pronounced.

Objections.—(*a.*) *Putrefaction* may cause the lungs to float. This is true, in certain circumstances: when the lungs are in that state of putrefaction in which gases are abundantly generated, and cannot immediately escape, they are buoyant, and swim in water. But putrid lungs do not always float; they may not be sufficiently putrid, or their putridity may have attained such a degree as to keep them at the bottom, even though they had once contained air in their air-cells. In the latter case, by the way, the hydrostatic test is of no use; and neither will any other test avail; for the infant's body must, in such a state of things, be one mass of corruption.

The attainment of the latter condition generally requires much time; but there are circumstances in which putrescency may be developed sooner than might be expected; as, for instance, where an infant has been immersed in water for a week or ten days, and then is exposed to the air for about four-and-twenty hours. The viscera undergo rapid decomposition, and the lungs are commonly found putrid. So rapid and energetic is the evolution of gases in adults, under these circumstances, that, as M. Devergie informs us, bodies exhibited at the Morgue are frequently observed to change their position, and common people looking on, are often alarmed, fancying that the movements are voluntary.

But in ordinary cases submitted to the medico-legal examiner—say within a few hours or days after birth—there can be no room for even supposing the presence of putrefaction. In fact, the lungs are known to be among the last, if not the very last, parts of the body which become putrid; and it has often happened, that when the body of an infant has been found in a state of putridity, the lungs have still been fresh, and fit for the application of the proper tests.

When, however, there is reason to suspect that the lungs float owing to this cause, let them be examined; and if putrid gases are really developed, rendering them specifically lighter than water, those gases will be seen, in large bubble-like vesicles, on the surface and between the lobules; whence they may be readily expelled by pressure under water. For greater certainty, the lungs may be cut in pieces, and each piece pressed separately: such pressure will not destroy the buoyancy of the parts, if they have ever received atmospheric air into their cells; whereas they sink at once if they had floated through mere putridity.

(*b*). *An emphysematous condition* may cause the floating of the lungs. It sometimes happens that infants suffer violence in the birth; the labour, perhaps, being tedious, and the mother malformed. The sides of the chest may be so pressed against the substance of the lungs as to do those organs injury: they become inflamed and

puffy, containing air in large vesicles on their surface; and this is what some authors call emphysema. When such a state does exist, it may be recognized by the experienced eye, and by the superficial air expelled, as in the case of the putrid gases. No serious obstacle consequently can arise from this cause to the application of the hydrostatic test.

(*c.*) *Air may have been artificially introduced.*—The *static* test may be here brought to our aid. Air blown into the lungs of a still-born child never produces all the changes which follow natural respiration. The moment the atmospheric air is admitted into the lungs of a living child, those organs are expanded, and their vessels filled with blood from the heart. Their weight consequently is increased,—doubled, as we have seen in some instances: so that by comparing the weight of the lungs with the weight of the body, a presumption of much importance may be formed.

The appearance of the lungs affords a strong indication. Experiment shows that the lungs of an infant, perfectly still-born, the moment the air is blown into them, undergo a remarkable change both in colour and bulk. Their colour, from being of a dark chocolate hue, becomes a florid or bright scarlet, and their volume, instead of occupying a small portion merely of the contracted chest, is now, by the admission of air, constantly increased. When a blow-pipe is introduced into the trachea, the chest having been previously opened, these striking appearances are immediately produced. But when inflation is attempted by the mouth, the alteration of colour as well as increase of volume are only partial; and this affords one of the distinguishing characters between the two states of the lungs in question. While inflation tried on the still-born infant, with a view to resuscitation, is never found to operate completely the changes just mentioned, natural respiration, especially when the child is born mature, and there is no congenital disorder of the lungs present, renders those organs uniformly of a bright pink or rosy hue, and their volume throughout is augmented.

Again: another peculiarity by which the effects of inflation may be distinguished from those of respiration, is, that strong and energetic pressure will cause to sink every particle of lungs artificially inflated, while no mere pressure, short of absolute breaking up and mashing of the parts, will cause those lungs wholly to sink with which an infant has naturally respired.

We are indebted to Beclard for the first suggestion of the application of pressure; but Mr. Alfred Taylor, of Guy's Hospital, and the late Mr. Jennings, of Leamington, are entitled to much credit for having, by their experiments, which were conducted independently, and almost about the same time, put the efficiency of the method beyond a question. Both have shown that by wringing the lungs in a strong cloth, the air may be so perfectly expelled from the inflated lungs of a still-born infant, that they shall all and every part of them sink in water: whereas, in the case of lungs that have naturally respired, even the smallest particles still remain buoyant—as long, in fact, as there is any portion of them not completely mashed. Mr. A. Taylor, indeed, does not think it necessary to carry the compression to such an extreme degree *.

The objection that artificial inflation might have been practised, it must be confessed, may sometimes present the medical jurist with more than ordinary difficulty. But the circumstances of the case ought to save him from vexatious and needless investigation. The truth is, that such a plea on behalf of an accused mother is extremely rare, not only because, in most cases, it has no foundation in truth, but because, to render it probable, evidence of many collateral facts ought to be forthcoming. The female who would endeavour to save her child by inflating its lungs, should have given other proofs, besides, of her maternal tenderness: she should not have concealed, at least from some intimate friend, the fact of her pregnancy; her delivery should not have been secret; she should have prepared for the birth—the living birth—of her infant; there should be no marks of wilful violence on the body: in short, it is easy to judge from the history of any given case, whether the accused *wished* the life or death of the child, and therefore whether it is likely she *would*, (even allowing that, with sufficient strength and self-possession at such a moment, she *could*) inflate the infant's lungs.

The idea has also been broached, that possibly inflation might have been practised by some malicious person, in order to trump up a charge of infanticide against the mother. Now there happens never to have been, as we trust there never will be, an instance of this kind of villainy. Only consider all that would be required to make it in any degree effective. The diabolical perpetrator of such a deed should have some medical and medico-legal knowledge; his interference, too, could hardly have been premeditated—at least it must

* Medical and Physical Journal, May 1833, p. 376.

be contingent on the infant being born dead. In this case, too, there should be no collusion, or semblance of guilt, about the mother; no secrecy, no feigning, nor dissembling: in fine, no violence on the body of the child; or should there be marks of violence, they should be such as were probably inflicted *after* death, not before it, as the infant is presumed to have been still-born; so that, on a little reflection, it must be seen how almost utterly impossible it would be to substantiate a plea of this kind, were it ever set up in a trial for infanticide.

(*d.*) *The infant might have breathed in the passage.*—It is beyond a doubt that an infant *may* breathe, and yet die, before it is wholly expelled from the mother; but if it be so vigorous as to commence respiration thus early, what may have caused its death before it was wholly born? Such cases are universally admitted to be rare, and when they do occur, to be owing to tedious delivery, or some physical obstacle on the part of the child, or the mother, in the way of malformation. If anything of this kind have caused the infant's death, it ought so to appear in evidence. Respiration in the passages may also take place, where the child is born by the feet, and the head is detained for some time; or where the hand is introduced to accelerate a tedious labour. But neither of these cases is likely to occur in the practice of legal medicine, for they imply the presence of medical or other assistance; at least the circumstances preclude the idea of concealment. The objection, therefore, of breathing before delivery, ought not to be admitted without some feasible ground. It is to be recollected, also, that the hydrostatic test, in shewing that the child *did* breathe, has performed its office; *when* it breathed, and *where*, must be made out by other evidence.

(B.) *Sinking of the Lungs.*

The sinking of the lungs, wholly and every part, proves that the infant never respired—provided the following doubts or objections cannot be plausibly urged.

Objections: (*a.*) *The lungs may be diseased.*—No doubt there are diseases which begin even in fœtal life; and the lungs of an infant may be so studded with tubercles, or gorged with blood or other fluids, that even though respiration have partially begun, they sink when put in water. Or they may be affected with Jörg's *atelectasis*, as we shall hereafter see. But this state of things can scarcely lead into error; the eye of the pathologist can judge of the presence of disease; and, besides, if respiration have taken place, the lungs cannot be so complete a mass of disorganization in a new-born infant, as that *every* part of them should sink. Cut these organs, then, in pieces, and observe whether they *all* sink: if they do, there can have been no respiration.

(*b.*) *The infant may have been too feeble* to respire sufficiently to cause the lungs to float: those organs sink because their air-cells have been only very partially expanded. Granted that they *may* sink in their totality or integrity, yet unless, upon dividing them into small pieces, every portion sinks, the efficiency of the hydrostatic test rests unimpaired. Both experiment and theory warrant the deduction that it is impossible the lungs, in whole and in part, should sink, if they once received air. There is, however, one case, and we believe only one, on record, in which the lungs, and every part of them, are said to have sunk—the subject being an infant known to have lived and breathed for a time. Dr. Bernt, of Vienna, relates the case. In a seven months' child, which lived *two hours*, the lungs, he says, were ten and a half grains heavier than their volume of water, and *every fragment sank*. But, with all due deference to the high authority on which this fact is stated, it may be doubted whether the experiment was carried sufficiently far to ascertain that *every* portion, however small, sank under the given circumstances. At all events, the most rigorous conclusion respecting the present objection can amount only to this—that here is a solitary instance in which the hydrostatic test does not show that air had been admitted into the lungs, even where respiration is known to have taken place.

Whenever the medical jurist finds himself in this difficulty—which confessedly will very rarely happen—he must only rest his decision on the application of the other tests—the colour, consistence, and volume of the lungs; their absolute weight as compared with that of the whole body; the condition of the vessels of the liver and heart; the state of the stomach, umbilicus, &c. From all these, with a proper regard to their relative and combined value, he will be able to derive a satisfactory conclusion.

(*c.*) *An infant may live for a short time without breathing.*—The English law distinctly recognizes this fact, though the Scotch does not. A child may be born in the membranes—or with a *caul*, as the vulgar designate it—and in that state it may be destroyed, yet the hydrostatic test give no evidence that it had survived birth. This is true: for the hydrostatic test only indicates that breathing did, or did not, take place; and, of course, in the circumstances in question, does not apply.

But neither do any of the other tests with which we are acquainted. The only means, therefore, by which this objection can be removed, is, by moral evidence of the fact that the infant never moved.

Such are the peculiarities of the hydrostatic test in its simple form, and such the precautions to be used in applying it.

Modifications of the Hydrostatic Test.

Two methods have been proposed, and one of them actually put in practice, whereby the common mode of observing the specific gravity of the lungs might be improved.

Daniel's test.—Daniel, in 1780, contrived a balance, one scale of which was suspended in a tin or sheet iron vessel, large enough to permit the free immersion of the organs of the chest. First, the lungs, heart, and thymus, were carefully removed from the body, tying the large blood-vessels; they were weighed in the usual manner: the heart and thymus were then weighed separately—the difference of weight being that of the lungs. The lungs were then weighed in water (being caused to sink, if necessary, by an additional apparatus), so as to ascertain their loss of weight in that fluid, which of course depended on their volume,—the loss of weight on hydrostatic principles being equal to that of the bulk of water displaced. Hence, for example, lungs equivalent in volume would lose equal weights, although the same lungs, before immersion, might have been to each other as 2 to 1. In this case the probability would be that the lungs weighing 1 in air were artificially inflated.

The design of Herr Daniel was to distinguish, if possible, between the effects of respiration, and those of artificial inflation. But the utmost that could be gained by the practical use of his method, would be the formation of tables, whereby certain averages might be determined for resolving doubtful questions concerning respiration. No such tables have ever been constructed; and even if they had been, it is extremely questionable how far they would prove satisfactory.

Bernt's test.—Prof. Bernt, of Vienna, some years ago, devised another plan for perfecting the hydrostatic test. He took a glass jar, a foot in height, and three and a half in diameter. Two pints of distilled water were introduced into the vessel, and the level of the fluid was marked accurately and permanently on the glass. Three double columns were then drawn in the same manner vertically on the vessel; each for male and female fœtuses of seven months, eight months, and nine months. The lungs and hearts of fœtuses of these ages were then procured, under circumstances exactly known as to their having never respired, imperfectly respired, or respired perfectly. By the careful immersion of the organs of the chest, in each case, a scale in the respective columns was formed, which was to serve as a standard of comparison for the lungs and hearts of other fœtuses, the history of which might be unknown, but the fact of whose respiration might be hereby determined.

Several objections have been made to the efficiency of this instrument, and even to its accuracy; inasmuch as it is founded on principles which are rather more theoretically than practically true. It will not be necessary for me here to enter into an examination of these points: suffice it to say, that while Bernt's method is perhaps more simple, and better suited to practical purposes, than Daniel's, it is still very far from being so free from faults (independently of the difficulty of procuring the required vessel), as to render it likely ever to be adopted by medical jurists in this country. Even in Germany it has never, I believe, been more than once employed in a court of justice; and in France it seems to have met with no reception.

Proofs of Respiration from the Circulatory Apparatus.

When an infant has begun to breathe, certain changes immediately take place in the organs provided for the circulation of the blood. A change, for example, occurs in the shape and size of the arterial duct, in the position of the foramen ovale, and in the venous canal. Each of these shall be noticed separately; but first let us refer for a moment to the locality of the principal parts concerned; they are represented in the following figure of the *peculiarities of the fœtus*:—

Blood is supplied from the placenta (supposed to be on the left hand side of the page), through the umbilical vein (*r*), to the liver (*b*, *c*), heart (*a*), and thence to the whole of the body of the fœtus. The vein, just mentioned, having sent several branches into the liver, communicates directly with the ascending cava (*p*), by the vessel (*s*) which is peculiar to the fœtus, and is named the *venous canal*. The blood, upon reaching the right ventricle of the heart, is thence propelled into the pulmonary artery (*k*). Now, previous to the commencement of the respiratory process —during uterine life, for example—a very small portion of blood is sent to the lungs by the right and left branches of the artery last mentioned—perhaps no more than they passively, and in their collapsed state, admit; but the great mass of it is

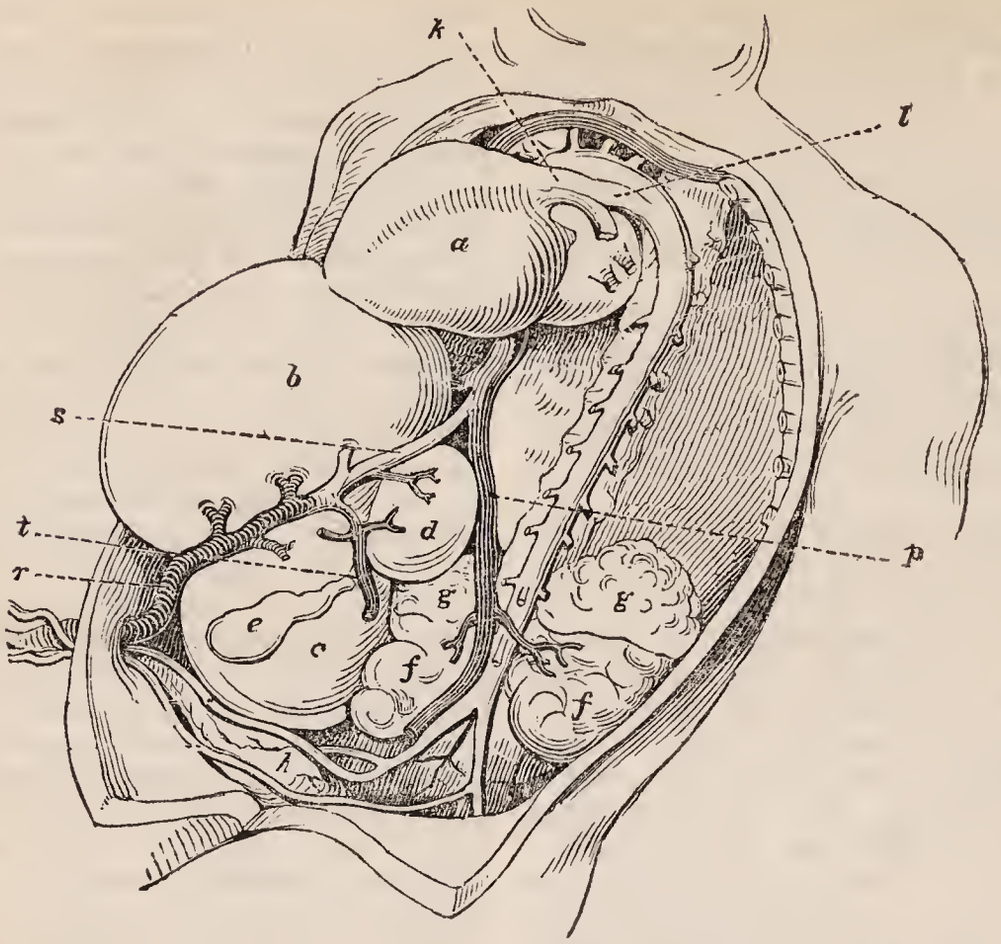

FIG. 27.—*Peculiarities of the Fœtus.*

thrown directly into the aorta, through the medium of the *arterial duct* (*l*). Respiration, however, having once begun, a material alteration is observed to take place in this latter vessel; and this we now proceed to notice.

State of the arterial duct: the Vienna test.—The arterial duct (*m*, fig. 28) is about half an inch in length, and its calibre nearly equal to that of the pulmonary artery.

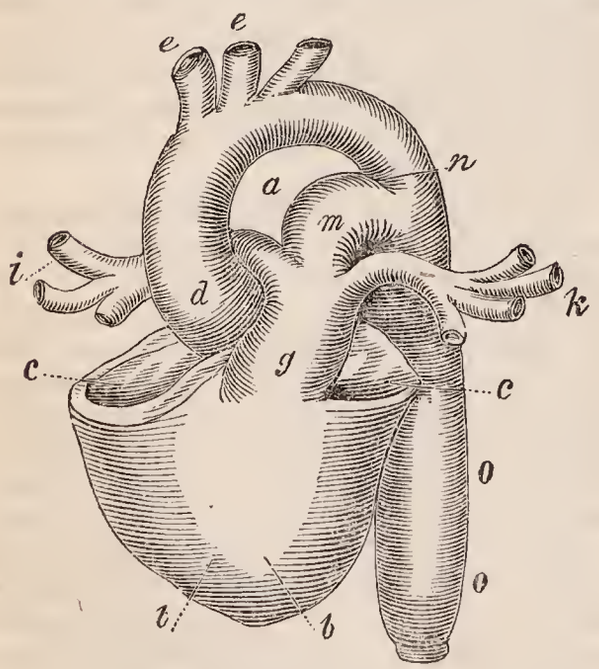

FIG. 28.

The fœtal heart, with the auricles removed so as to display the roots of the pulmonary artery (*g*) and the aorta (*d*). The arterial duct (*m*) is separated a little from the aorta, leaving the space (*a*) between them.

Now, according to Dr. Bernt, breathing has no sooner begun than the shape of the duct alters; from being cylindrical it becomes conical; the aperture by which it enters the aorta at (*n*) becoming contracted and oval. This happens, says Dr. Bernt, even in the course of a few moments. If the child has breathed for some hours, or days, the duct is found once more cylindrical, but much contracted, and shorter; so that it is now, perhaps, not longer than one of the pulmonary branches. After respiration for a week, the arterial duct is dwindled to the size of a crow-quill, having been, before breathing commenced, fully as large as a goose-quill.

If these changes invariably took place at the epochs, and after the manner, described by the Vienna professor, they would constitute an invaluable test—as was, indeed, at first, most sauguinely expected. In any case of disputed respiration, it would then have been only necessary to lay bare the great vessels at the summit of the heart, and compare the arterial duct with the pulmonary artery in shape and size. But, unfortunately, though the fact of the occurrence of these changes is unquestionable, they are not found to proceed with that order and regularity, much less with that rapidity, in the first instance, pointed out by Bernt. Even his own cases, related in the tract in which the nature of the test is

deseribed, furnish suffieient evidenee of its preeariousness. Other observers, too, have failed in finding it eorrect: so that at present the test of Bernt, or the *Vienna* test, as it has been ealled, is only eonsidered as a secondary one,—one, however, whieh ought never to be overlooked in investigating the question of live or still birth; for however inexact it may be in enabling us to state the length of time during whieh an infant breathed, it has considerable weight in serving to determine, in eonjunction with other tests, whether the infant *ever* respired or not.

Foramen ovale.—The state of the foramen ovale may also serve in some degree to show whether fœtal life had ceased, and extra-uterine, by respiration, had begun. The situation of this aperture, between the right and left auricle of the fœtal heart, is represented in the subjoined figure.

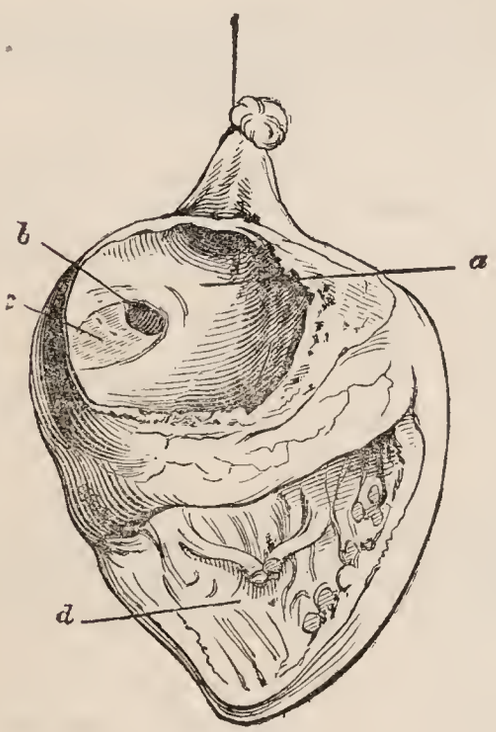

Fig. 29.

The fœtal heart, suspended by the superior cava. The interior of the right ventricle (*d*) and auricle (*a*) displayed; *c* is the valve, and *b* the foramen ovale.

Through this opening (*b*) a portion of the blood from the right side of the heart is sent to the left side, without being previously circulated through the lungs. In some infants it becomes closed as early as the first day after birth; but this is not very usual: more frequently several days elapse, and in certain instances even years, without its closing. For medico-legal purposes, therefore, the fact of the elosure of the foramen ovale can be of little or no value; but there is another fact eonnected with the same opening, which is rather better deserving of notiee. The position of the foramen on the valve (*c*) is said to change

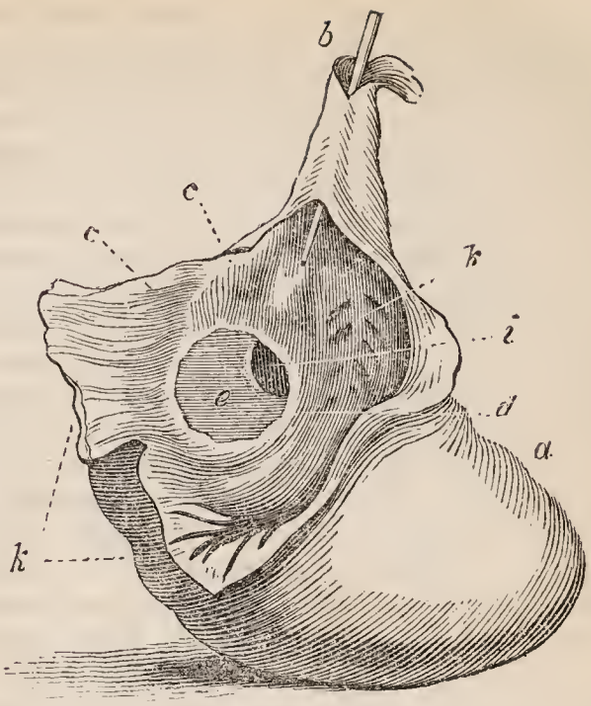

Fig. 30.

Another view of the right auricle, laid open to display the foramen ovale. This figure, and figure 28, are taken from sketches by Dr. J. Beck.

gradually after birth. It is originally situated in the eentre; but as soon as respiration begins, it is on the right side, whenee it subsequently proeeeds, from below upwards, towards the left side; thus revolving, as it were, round the right edge of the valve. It must be confessed, however, that the aseertainment and appreeiation of these facts require a degree of anatomieal dexterity not eommonly met with among practitioners,—which must be a bar to the practical utility of the test, even though it were better recommended to us than it is by the experienee of good observers; for such have not always found the reality to correspond with the doctrinal statement.

Venous canal.—This vessel (*s*, fig. 27) is rarely found impervious before the fifth day after birth, and its ehanges eonsequent on respiration oceur so slowly, as to be searcely, if at all, available for the purposes of the medieal jurist. It must be reeolleeted, that the question in reference to infanticide generally is, whether the infant was still born, or lived a few moments or hours. Now the process of obliteration does not begin to be observable in the venous canal till about the second or third day.

The Liver.—It has been attempted to found upon the changes undergone by the liver in consequence of respiration, another test for ascertaining whether an infant ever respired or not. The liver, during fœtal life, is known to be an important organ; it is comparatively larger and heavier at this period than it is afterwards; it forms a large reservoir for the blood, where perhaps some important alterations are effected in this fluid before it

is sent on to the heart. Now, when the lungs are expanded by respiration, they receive a large quantity of the circulating blood, and it is generally supposed that in this way they take upon them, in some measure, certain functions which the liver had previously performed: at all events, the latter organ is found, in most cases, to be more contracted in size, and less loaded with blood, than it usually is anterior to birth. Hence it was suggested that probably a static *liver*-test, on the principle of Ploucquet's *lung*-test, might be contrived—by determining the ratio of the weight of the liver to that of the whole body. According to Henke (*Abhandlungen*, Band 5.), this suggestion was first made by Autenrieth, of Tübingen, in 1806; and afterwards, in America, by Dr. John Beck.

The Medical Faculty of Tübingen actually proposed it as a prize question, a few years since, to ascertain whether there was not a constant ratio between the weight of the liver, before and after death, and that of the body. Some very valuable dissertations were the result. But the conclusions were unfavourable to the establishing of a liver-test. And such a test, obviously, were it possible to establish one, must always be secondary and subordinate to the lung-test; for not only is the lessening of the absolute weight of the liver dependent on the increase of that of the lungs, but the alteration can never be so strongly marked in the liver as in the lungs; the latter bearing originally so small a proportion to the weight of the body, and not being, on an average, above a third part of the weight of the liver. It has already been shown that the static lung-test is sufficiently precarious; but from a few examples it will readily be understood that a static *liver*-test, were there one, must be infinitely more so: for it appears to be materially modified by the kind of death which the infant suffers, and to have some special relation to the size and condition of the placenta.

Dr. Koch, of Hamburgh, author of one of the Tübingen prize dissertations *, supplies us with the following facts:—

	Liver to body.	Lungs to body.	Lungs to liver.
Still-born, heavy and large child, labour very difficult	1 : 13	1 : 57	1 : 4
Died in birth—artificial labour	1 : 94	1 : 87	1 : 1
Born dead, child large, pelvis deformed, sugillations	1 : 40	1 : 80	1 : 2

These cases, Dr. Koch confesses, were the most striking and remarkable among the 79 (26 still-born and 53 live-born) which he examined; but then it appears that of the entire number no more than 17 approached to what is commonly allowed to be about the average standard, namely—

	Liver to body.	Lungs to body.	Lungs to liver.
In the still-born	1 : 22	1 : 65	1 ; 3
In the live-born	1 : 25	1 ; 30	1 : 1

From these circumstances we may fairly conclude that no liver-test, exact enough for medico-legal purposes, has hitherto been, or is likely soon to be, established. Yet, though our observations on the state of the liver may not of themselves warrant us in forming a reasonable presumption for or against the fact of respiration, they should by no means, in inquiries of such vital interest as those relating to infanticide, be neglected; for the inference they would authorize, however slight in itself, might have much force, taken in conjunction with other deductions from other premises. In short, that rule applies here, which can scarcely be too frequently repeated, that the medical jurist, in his researches connected with the serious charge of infanticide, must never rely solely upon any one test, or particular mode of proof, but observe how far this corresponds in its evidence with the other tests, for in the multitude of these, consentient and combining, there is safety.

* Dis. inaug. medico-forensis, &c. Tubing. 1831.

LECTURES

ON

MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LVII.

Another and an important umbelliferous plant is the

Conium maculatum.

History.—This plant is usually supposed to be the κώνειον of the Greek writers, the celebrated *Athenian state poison*, by which Socrates and Phocion died, and the *cicuta* of the Roman authors. Various reasons contribute to give the common opinion on this point a high degree of probability. Dioscorides described the plant sufficiently well to prove it must have been one of the Umbelliferæ; and he tells us it had a heavy odour, and a fruit like that of anise. The latter simile applies to our Conium, for a very intelligent druggist mistook, in my presence, the fruit of the hemlock for that of anise. Dioscorides also tells us that the κώνειον of Crete and Megara was the most powerful, and next to this came that of Attica, Chio, and Cilicia. Now Dr. Sibthorp found Conium maculatum growing near Constantinople, not unfrequently in the Peloponnesus, and most abundantly between Athens and Megara. So that the locality of our Conium agrees, as far as has been ascertained, with that of the ancient plant. We may gather from the poetical account of the effects of κώνειον given by Nicander, that this plant "brings on obliteration of the mental faculties, dimness of sight, giddiness, staggering, stifling, coldness of the limbs, and death by asphyxia; a view of its effects," says Dr. Christison, "which differs little from the modern notions of the poisonous action of the spotted hemlock." It is also remarkable that the ancients regarded κώνειον as having the power of discussing tumors—a virtue which has been assigned to hemlock by writers of the present day.

I am fully aware that the characters of the ancient plant, as given us by Dioscorides and Pliny, are insufficient to distinguish it from some other Umbelliferæ, yet I think the evidence of its being our Conium maculatum is deserving of much greater confidence than Dr. Christison is disposed to give it. The absence of all notice, in the writings of the ancients, of the purple spots on the stem, has been urged against the probability of this opinion. "Pliny's term *nigricans*, applied to the stem, is but a feeble approach," says Dr. Christison, "to the very remarkable character of the modern plant, the purple spotted stem." It is somewhat remarkable, however, that a celebrated modern writer has employed a very analogous term in describing the hemlock plant. In Mr. Waller's translation of Orfila's Toxicology, the inferior parts of the stem of Conium maculatum are said to be covered "with spots of a brown purple, or *blackish*," so that Pliny is not alone in his erroneous account of the colour of the stem.

One fact strongly in favour of the identity of the ancient and modern Conium is, that there are no other poisonous Umbelliferæ growing in Greeee, to which the description of Dioscorides and Pliny could apply, than our Conium: at least none others were found by Dr. Sibthorp, otherwise he would have noticed them in his "*Prodomus Floræ Græcæ.*" Thus we may infer that the Cicuta virosa (which, according to both Haller and Dr. Christison, "comes nearer the ancient description than any other" of the poisonous Umbelliferæ); the Œnantha crocata, Œthusa Cynapium, Chærophyllum temulentum, and Phellandrium aquaticum, are not natives of Greece. Now this fact taken in conjunction with another—namely, that Conium maculatum grows in the very spot indicated by Dioscorides, is strongly in favour of the identity of this plant with the κώνειον of the Greeks.

Etymology.—It is evident that our generic term Conium is derived from the Greek word κώνειον. Linnæus has been censured by Lamarck for using this name, since the Latin authors call our hemlock *Cicuta*, which he, therefore, contends ought to be its designation now. But it ought to be recollected that Linnæus has only restored its ancient name, for the word Cicuta is unknown in the Greek language. By modern botanists the term Cicuta is applied to a distinct genus of plants, and when, therefore, we meet with it in botanical works, we must not confound it with the Cicuta of the Romans.

Botanical characters.—Conium maculatum is an indigenous plant, frequently found growing in waste places, banks, and under walls, flowering usually in June and July. Its root is biennial, fusiform, whitish, and from six to twelve inches long, having some resemblance to a young parsnip. The stem is from two to six feet high, round, smooth, shining, hollow, and

spotted with purple. The leaves are tripinnate, with lanceolate pinnatifid leaflets, of a dark and shining green colour, smooth, very fœtid when bruised, with long, furrowed footstalks, sheathing at their base. The umbels are many rayed, furnished with a general involucre of several (usually from three to seven) lanceolate leaves, which are membranous at their edges: the partial involucre is composed of three leaves on one side. The calyx is obsolete: the corolla consists of five white obcordate petals, inflexed at the points: the stamina are five, epigynous, and as long as the corolla: the ovarium is ovate, two-celled, striated: there are two filiform spreading styles, each furnished with a round stigma. The fruit is ovate, and compressed laterally: each of its mericarps, or carpels, has five primary (but no secondary) ridges, which are undulato-crenated: the channels have many striæ, but no vittæ. The seed has a deep hollow groove in front.

In distinguishing hemlock from other Umbelliferæ, the following characters should be especially attended to; the large, round, smooth, spotted stalk — the smooth, dark, and shining green colour of the lower leaves—the disagreeable smell when bruised (compared by some to that of mice, by some to fresh cantharides, by others to that of cat's urine) — the general involucre usually of from three to seven leaves—and the partial involucre of three leaves.

The indigenous Umbelliferæ most likely to be confounded with Conium maculatum are Œthusa Cynapium, or fool's parsley, and Anthriscus vulgaris, or common beaked parsley.

Œthusa Cynapium is distinguished from hemlock by its smaller size, by the absence of the strong disagreeable smell of the leaves, by the non-existence of spots on the stem, by the want of a general involucre, and by three long, narrow, unilateral drooping leaves composing the partial involucre.

Anthriscus vulgaris is distinguished by the lighter colour, and slight hairiness of the leaves, by the absence of spots on the stem, by the swelling under each joint, by the absence of a general involucre, by the roughness of the fruit, and by want of the strong unpleasant odour when the leaves are bruised.

Chemical composition.—Schrader, of Berlin, has published a comparative analysis of wild and cultivated hemlock, but with no important results. He tells us that the juice of hemlock has a striking resemblance to that of our common cabbage; and he gives the following as the constituents of the two.

	Hemlock.	Cabbage.
Extractive	27·3	23·4
Gummy extract	35·2	28·9
Resin	1·5	0·5
Vegetable albumen	3·1	2·9
Green fecula	8·0	6·3
Water, with acetic acid, sulphates, chlorides, nitrates, and phosphates of potash, lime, magnesia, iron, and manganese	924·9	938·0
	1000·0	1000·0

It will be evident from this analysis that Schrader did not succeed in isolating the active principle of the plant.

Peschier has asserted the existence of a new organic salt in hemlock, which might be termed *coniate of conia*, since he says it consists of a peculiar acid, which he calls *coniic acid*, and an alkali. His statements, however, require confirmation.

Brandes also analysed hemlock, and gives as its constituents—

A peculiar basic substance (*conicine*).
Very odorous oil.
Vegetable albumen.
Resin.
Colouring matter.
Various salts.

In 1827, Giseke obtained the active principle of hemlock (*conia*) in combination with sulphuric acid, and made various experiments with it. In 1831, Geiger procured the *conia*, for the first time, in an isolated form, and described some of its properties and effects on animals. It has subsequently been more fully investigated by Dr. Christison, and by MM. Boutran-Charlard and O. Henry. Let us pass in review some of the principal constituents of hemlock.

1. *Odorous priciple.*—The activity of hemlock does not depend on its odorous principle, for the distilled water of hemlock, which possesses in a high degree the odour of the plant, is scarcely, if at all, poisonous. The odorous principle is volatile oil.

2. *Conia.*—This alkali, which has also been termed *cicutine*, *coneine*, and *conicine*, was, as I have already mentioned, first obtained in the isolated state by Geiger in 1831. Its properties were carefully examined by Dr. Christison in 1836. In 1834, Deschamps, an apothecary at Avillon, asserted that the conia of Geiger owed its alkaline properties to ammonia, and that the odorous principle which accompanied the ammonia could not saturate acids. His assertions, however, have

been completely disproved by MM. Boutran-Charlard and O. Henry, during the last year (1836).

Conia has been found in the leaves and fruit, and probably exists in all parts of the plant. Dr. Christison obtained $2\frac{1}{2}$ ounces of hydrated conia from 40 lbs. of the green seeds (mericarps). The leaves contain a less quantity than the fruit.

Conia exists in hemlock as a salt,—that is, in combination with an acid. Hence the use of the alkali (soda, potash, or lime) employed in the process is to abstract the acid, and thereby to set free the conia. It is uncertain what acid is combined with the conia: Peschier, as already related, says it is a peculiar organic acid (*coniic acid*), crystallizable in six-sided prisms, insoluble in æther and alcohol, and capable of decomposing the calcareous and barytic salts.

Preparation.—One method of preparing conia, and which yielded Dr. Christison the largest product, is to distil the alcoholic extract of the seeds (mericarps) with its own weight of water and a little caustic potash.

MM. Boutran-Charlard and O. Henry have procured it by another process without the use of alkalies.

Properties. — When pure, conia is an oily-looking transparent liquid, lighter than water. Its odour is strong and penetrating, and is said to be like that of hemlock, of tobacco, and of mice, combined: its taste is acrid. It is sparingly soluble in water, but is entirely soluble in alcohol and æther. It reddens turmeric, and neutralizes the dilute acids, forming salts. While saturating, the liquors have a bluish-green tint, which subsequently passes to a reddish-brown. It combines with about a fourth of its weight of water to form a *hydrate of conia*. When placed in a vacuum, in the presence of bodies very attractive of water, it in part volatilizes, and leaves a reddish, very acrid, pitchy residue, which appears to be anhydrous conia. The vapour of conia is inflammable. By exposure to the air, it acquires a dark colour, and is resolved into resin and ammonia. Its boiling point is 370° F., but it readily distils with water at 212° F.

Composition. — According to Liebig, it consists of—

Carbon	66·91
Hydrogen	12·0
Oxygen	8·28
Nitrogen	12·8
	99·99

These numbers nearly correspond to—

11 atoms carbon	66
12 atoms hydrogen	12
1 atom oxygen	8
1 atom nitrogen	14
	100

But until its saturating powers be ascertained, its atomic weight cannot be determined with accuracy.

Characteristics.—That it is an alkali, is shewn by its action on turmeric paper, and by its neutralizing acids. Like ammonia, its vapour produces white fumes with the vapour of hydrochloric acid. It agrees with the other organic alkalies in producing a copious white precipitate (tannate of conia) with infusion of galls. From ammonia it is distinguished by its odour and inflammability, and by the solubility in alcohol and deliquescent character of its sulphate. From the other vegetable alkalies it is distinguished by its liquidity at ordinary temperatures, by its volatility, and by its odour. It is not reddened by either nitric or iodic acids.

Salts of conia.—Several of the salts of conia are crystallizable: they are deliquescent and soluble in alcohol. When we evaporate solutions of these salts with a gentle heat, they lose, like the ammoniacal salts, a part of their base, the odour of which may be readily recognized. The nitrate of conia, when decomposed by heat, yields brown pyrogenous products. If potash be added to an inodorous salt of conia (as the sulphate), the conia is immediately set free, and may be recognized by its odour.

Effects of conia.—On animals.—The effects of conia have been tried on various animals, namely—

Mammalia, as the dog, cat, rabbit, and mouse.
Aves, as the pigeon, kite, and sparrow.
Reptilia, as the slow worm.
Amphibia, as the frog.
Annelida, as the earth worm.
Insecta, as the fly and flea.

One drop placed in the eye of a rabbit killed it in nine minutes; three drops used in the same way killed a strong cat in a minute and a half; five drops poured into the throat of a small dog began to act in thirty seconds, and in as many more motion and respiration had entirely ceased.

The following are the symptoms produced, as detailed by Dr. Christison. "It is, in the first place, a local irritant. It has an acrid taste; when dropped into the eye, or on the peritoneum, it causes redness or vascularity; and to whatever texture or part it is applied, expressions of pain are immediately excited. But these local effects are soon overwhelmed by the in-

direct or remote action which speedily follows. This consists essentially of swiftly-spreading palsy of the muscles,—affecting first those of voluntary motion, then the respiratory muscles of the chest and abdomen, lastly the diaphragm, and thus ending in death by asphyxia." Convulsive tremors, and twitches of the limbs sometimes, though not invariably, are observed. The external senses do not appear to be affected until respiration is impaired. If a rabbit be lifted up by his ears when under the influence of the poison, he makes the same kind of struggles to be released that he does when in health. So also if we place him in an uneasy posture, he makes attempts to alter his position, proving that his senses are unimpaired. After death the muscles are susceptible of the galvanic influence. MM. Boutran-Charlard and O. Henry state that most of the animals to whom they gave conia became "a prey to the most dreadful convulsions. The plaintive cries, the contortions, and the rigidity of the limbs, which have always preceded death, leave no doubt as to the cruel pains which this kind of poisoning brings on." This account agrees neither with my own observations, nor with those published by Dr. Christison.

Does conia become absorbed? In favour of the affirmative view of this question may be mentioned the fact, that this alkali acts on all the textures admitting of absorption; and that the quickness with which the effects occur are in proportion to the absorbing power of the part. But the rapidity of its action when introduced into the veins is a barrier to the supposition of its acting on the nervous centres by local contact; for Dr. Christison states, that two drops neutralized by dilute muriatic acid, and injected into the femoral vein of a young dog, killed the animal in two or three seconds at farthest.

The primary seat of the action of conia is probably the spinal cord. In this conia and strychnia agree; but in the nature of the effect, they seem, as Dr. Christison has observed, to be the counter-parts of each other. Conia exhausts the nervous energy of the cord, and causes muscular paralysis; strychnia irritates it, and produces permanent spasm of the muscles. Both kill by bringing on asphyxia, the first by the paralysis, the second by the spasm, of the respiratory muscles.

Antidote.—At present we know no antidote to this poison. Probably the infusion of galls would be the best remedial agent, since the tannic acid contained in it precipitates the conia. To prevent the asphyxia, artificial respiration should be performed. Might not strychnia be employed with advantage, since it appears to produce a condition of the spinal cord opposite to that of conia.

Uses.—The known effects of conia would suggest its employment in tetanus, and in poisoning by strychnia and brucia, or by substances containing these alkalies.

3. *Green fecula.*—This constituent of hemlock is not distinguishable from the green fecula of other plants.

4. *Vegetable albumen.*—This also is like the albumen of other plants.

5. *Extractive matter.*—This is brown, and soluble in water. It attracts oxygen slowly from the atmosphere, has a peculiar hemlock odour, and a bitter taste. Its ashes contain carbonate of lime, with traces of carbonate of magnesia, sulphate of potash, and chloride of potassium.

6. *Resin.*—This is soft, yellowish brown, and somewhat acrid.

Physiological effects.—(*a*). *On vegetables.* Marcet placed a haricot plant (*Phaseolus vulgaris*) in a solution of five grains of the extract of hemlock. In a few minutes the two lower leaves curled at their extremities; the next day they were yellow, and subsequently died.

(*b*). *On animals generally.* The effects of hemlock on animals have been tried by Harder, Wepfer, Orfila, and Schubarth. The animals experimented on were the dog, wolf, rabbit, and guinea pig. From the observations of Orfila, hemlock is a local irritant (though this action was not constantly observed), and produces giddiness, convulsions, loss of sensibility, palsy, and coma. This account, as Dr. Christison observes, does not agree with the symptoms induced by conia, which does not seem to affect the senses so long as the respiration goes on. "But it is possible," he adds, "that the difference is more apparent than real, and that hemlock has been supposed to extinguish sensation, merely because, by inducing paralysis, it takes away the power of expression; at least, in some experiments I have made, sensation did not appear to be affected; and the whole phenomena were identical with those produced by conia. In these experiments I used very strong extracts, prepared by absolute alcohol from the fresh leaves or the full-grown seeds; and each of them occasioned, in doses of thirty grains or thereabouts, paralysis of the voluntary muscles, with occasional slight convulsions, then paralysis of the respiratory muscles of the chest and abdomen, and finally cessation of the action of the diaphragm: sensation appeared to continue so long as it was practicable to make an observation on the subject; and the heart contracted vigorously for a long time after death."

(c.) *On man.*—In *small* or *medicinal* doses, hemlock has been frequently administered for a considerable period, with obvious relief, in certain diseases (tumors of various kinds, for example), without any other evident effect: hence the statement of some authors, that hemlock acts insensibly on the system. "It seldom purges (says Storck), "and very rarely vomits. Sometimes it increases perspiration, and often it occasions a copious discharge of viscid urine. In many patients, nevertheless, it does not sensibly augment any of the excretions." Long-continued use, especially if the doses be increased, will sometimes occasion disorder of the digestive organs or of the nervous system, dryness of the throat, thirst, and occasionally, it is said, an eruption on the skin. Choquet mentions the case of a man who gradually increased the dose of the extract to half a drachm: it produced slight delirium and syncopes, which obliged him to suspend its use.

In *large* or *poisonous doses*, the symptoms are those indicating disorder of the cerebro-spinal functions. In some of the best recorded cases the leading symptom was coma; the effects being altogether analogous to those of opium. In other instances, convulsions, or violent delirium, or both, were the prominent symptoms. As an illustration of the comatose condition sometimes brought on by this poison, I shall quote a case recorded by M. Haaf, a French army surgeon, and which occurred to him while in garrison at Torrequemada, in Spain, in March 1812:—

A soldier having eaten of some broth, into which hemlock had been put, went to sleep immediately after his supper. In an hour and a half he was found groaning and breathing with difficulty; in consequence of which M. Haaf was sent for. He found his patient in a profound sleep, without sense, respiring with extreme difficulty, and lying on the ground. His pulse was 30, small, and hard; the extremities cold; the face bluish, and distended with blood, like that of a person strangled. Twelve grains of emetic tartar were given, and occasioned some fruitless attempts to vomit. He became gradually worse, had violent palpitations of the heart, and died in three hours after his fatal supper.

Several other cases in which coma was the leading symptom might be quoted, but the one just related is the best.

We have no well-detailed cases in which delirium was the leading symptom. The following must suffice, by way of illustration; it is from Kircher. Two priests ate hemlock root by mistake: they became raving mad, and mistaking themselves for geese plunged into the water. For three years they suffered with partial palsy and violent pain.

As illustrations of the convulsions caused by hemlock, I may refer to the cases mentioned by Limprecht and Ehrhard. The first states that an old woman suffered for three months with abdominal pain and convulsive movements of the limbs, in consequence of eating hemlock root. Ehrhard mentions trismus as one of the symptoms in another case. Dr. Watson has related two cases in which giddiness, coma, and convulsions occurred.

Uses.—The following are some of the cases in which hemlock has been employed:—

1. *In cancer and scirrhus.*—The ancients seem to have been of opinion that hemlock exercised a specific influence over the breasts and testicles. "It extinguishes the milk," says Dioscorides, "and prevents the development of the mammæ of virgins: moreover, in boys it causes wasting of the testicles." Pliny gives a similar account of it, and adds, "it reduces all tumors." The same notions of its effects seem to have been entertained by the Arabians, for Avicenna praises it as a remedy for tumors of the breasts and testicles.

At the head of modern authors who have written on hemlock, stands the renowned Baron Storck, physician to the Pazmarian Hospital, at Vienna; who, in 1761, published the first of his essays on the medicinal uses of hemlock in various diseases, but more especially in cancerous and scirrhous affections. Of these essays very exaggerated accounts are frequently found in pharmacological works. Storck is represented by some as declaring hemlock a remedy capable of curing every cancer, and the charge is repeated in a recently published work: but surely the authors cannot have read his essays. In his second work, he says, "Many misunderstood my opinion of hemlock, from my first essay; as they thought that I had offered a remedy which I believed to be universal and sufficient, when given alone, in all cases. But I by no means meant so." In his Supplement, Storck desires "that no physician whatever may imagine that it is my opinion these disorders must in general, and every where, be cured by hemlock. I say, and acknowledge openly, that I have also had patients in every kind of them who have received no benefit from it; though, from the similitude of the disease, the use of it was indicated." The most candid and fair criticism of Storck's essays will be found in the Materia Medica of Dr. Cullen; and I quite agree with the opinion therein expressed, that

Storck "has represented the virtues of hemlock as much greater than ever they were, or ever will be found to be."

Storck, however, is not the only modern writer who has asserted that cancer and scirrhus were sometimes cured, at other times ameliorated, by hemlock. Cases illustrative of its beneficial effects were published by Marteau, in 1761; by Decotes, jun. in 1762; by Ehrhard, in 1763; by Larranture, and by Hoffmann, in 1764; by Ranard, in 1765; by Masars de Caselles, in 1770; by Lemoine, in 1772; by Collin, in 1779; by Buissonal, in 1787; and, much more recently, by Recamier. Bayle, in his "*Travaux Thérapeutiques*," has collected accounts of no less than forty-six cases of cancerous diseases, said to have been cured by hemlock, while twenty-eight were ameliorated. With this evidence before us, we can hardly refuse to admit that in diseases reputed cancerous, hemlock has, on several occasions, been beneficial. But it is also not the less true, that in the hands of a large majority of practitioners it has completely failed; and I believe that at the present day no surgeon has any confidence in it as a curative means, though he may occasionally employ it as a palliative—that is, to alleviate pain. Whether the failures ought, in part, at least, to be ascribed to imperfect modes of preparing this plant, we are as yet unable positively to affirm. One fact, however, is quite certain—that the preparations of hemlock in ordinary use, are in nine cases out of ten inert, or nearly so. The remark made by Dr. Christison, with respect to the physiological effects of this plant, applies well to the point under discussion. "If," says this writer, "physicians or physiologists would acquire definite information as to the physiological effects of hemlock, in small or medicinal doses, they must begin the inquiry anew. Little importance can be attached to any thing already done in this field, as I have no doubt whatever, that by far the greater proportion of the preparations of hemlock hitherto employed have been of very little energy, and, in the doses commonly used, are absolutely inert."

2. *Scrofula.*—Another disease in which hemlock has gained considerable celebrity is scrofula, in consequence of the favourable reports of Storck, Marteau, Dupuy de la Porcherie, Lemoine, Collin, Hufeland, Fothergill, and others. It is a remedy, however, which is far from being universally, or even generally, efficacious. It is best adapted for persons of an irritable constitution, and is employed to improve the discharge, and to heal scrofulous ulcers, and to diminish the size of enlarged absorbent glands. It is objectionable where active inflammation is going on, as well as when the digestive functions are much disordered.

3. *In visceral enlargements*, which are neither scrofulous nor carcinomatous, hemlock has been employed with occasional advantage. Thus in enlarged liver it has been used.

4. *In hooping cough.* In 1781, we are told, there reigned at Warsaw an epidemic of this disease: it was very obstinate, and resisted all the usual means of relief. Dr. Schlessinger obtained very beneficial results from the combined use of tartar emetic and extract of hemlock. In this country hemlock has been strongly recommended in hooping-cough by Dr. Butter: he says, it has an advantage over opium in not being so liable to check expectoration. The violent and periodical fits of coughing in this disease being apparently of a spasmodic nature, we can readily believe they may be relieved by hemlock, as well as by some other narcotics; but experience has fully proved that the disease is one which will run through a certain course independent of, or at least very little influenced by, hemlock or any other remedial means.

5. *As an anodyne.* The relief sometimes experienced in troublesome coughs by the use of hemlock is best referrible to the diminished sensibility of the bronchial membrane to the influence of the cold air. In various painful diseases, as coma, scirrhus, rheumatism, and neuralgia, hemlock is occasionally serviceable as an anodyne.

6. *In syphilis.* Storck, Collin, and others, have related cases illustrative of the beneficial effects of hemlock in syphilis. It is sometimes useful in alleviating nocturnal pains, and in diminishing the disposition to spread of irritable sores: beyond this it hardly deserves notice as a remedy for syphilis. I must refer to Mr. Pearson's "*Observations on the effects of various articles of the Materia Medica*" for some illustrative cases of its useful effects.

There are various other diseases in which hemlock has been recommended. I may mention only chronic diseases of the skin, dropsies, satyriasis, and nymphomania. Aretæus supposed hemlock had the power of extinguishing the venereal feelings, and St. Jerome tells us that the Ægyptian priests rendered themselves impotent by taking daily a little hemlock: hence the proposed use of it in satyriasis and nymphomania. Its effects in this way have, however, been denied. Storck applied for information on this point to women whose husbands had used hemlock, and says, "they were all content on their

part, and protested on their consciences that they had not found any diminution of their husbands' vigour." Both Bergius and Storck have mentioned cases in which hemlock restored the venereal feelings.

The following table is taken from Bayle's "*Travaux Therapeutique*:" it shows the results obtained in a number of diseases by the use of hemlock.

Diseases treated by Hemlock.	Number of Cases.	Cured.	Ameliorated.	Unsuccessful.
1. Cancerous maladies	341	46	28	267
2. Scrofula	43	34	4	5
3. Tumors and obstructions	40	35	4	1
4. Ulcers neither scrofulous nor cancerous	20	17	2	1
5. Syphilis	27	20	3	4
6. Tetters (Dartres)	11	11	0	0
7. Tineas (Teignes)	6	6	0	0
8. Pulmonary phthisis	6	5	1	0
9. Asthma	5	4	1	0
10. Leucorrhœa	5	4	0	1
11. Scorbutus	4	4	0	0
12. Cataract	6	3	0	3
13. Hemeralopia	3	3	0	0
14. Amaurosis	2	2	0	0
15. Dropsy	2	2	0	0
16. Amenorrhœa	2	2	0	0
17. Ophthalmia, called serous (scrofulous?)	1	1	0	0
18. Epilepsy	3	1	0	2
19. Rickets	1	0	0	1
20. Hæmorrhoids	1	1	0	0
21. Nasal polypus	1	1	0	0
22. Vomiting	1	1	0	0
23. Neuralgia	1	1	0	0
24. Gout	2	0	2	0
25. Chronic cystitis, with strangury	1	1	0	0
	535	205	45	285

Administration.—The usual mode of exhibiting hemlock internally is in the form of powder or extract. The *powder* is obtained from the leaves, and has, when carefully prepared, a very fine green colour, and the peculiar odour of the plant. The finest samples which I have seen were sold by Mr. Batley, of Fore-street. It should be preserved in well-corked bottles, in a dark cupboard, or in a bottle enveloped in dark coloured paper. It ought to evolve the odour of conia when treated with caustic potash, especially if heat be applied; and we ought not to use it if it have been kept beyond the year, as its powers become much diminished or lost by keeping. The dose of it is three or four grains twice or thrice daily, the quantity being gradually increased until some obvious effect on the system is produced.

The *extract* is prepared by the evaporation of the expressed juice. Most of what is procured in commerce is inert. "We were one day," says Orfila, "in the shop of an apothecary, who had several times furnished us with the extract of hemlock, which we had administered to dogs to the dose of ten drachms, without producing any serious accident. We endeavoured to prove to him that the medicine was badly prepared; and, in order to convince him effectually, we swallowed, in the presence of several persons who happened to be in his shop, a drachm of this extract (seventy-two grains) dissolved in two drachms of water. We felt no effect from it, whilst twenty or thirty grains of the extract, well prepared, would have probably proved fatal to us. Let it be conceived now what advantage a person is likely to derive from such an extract, who takes one or two grains of it per day, or even thirty or forty, with the hope of getting rid of a scirrhous tumor, or of any other disease."

The extract of hemlock usually contains very little conia; this has been shewn by Geiger and by Christison, and has been verified by myself. From extract, pro-

cured from one of the most respectable drug houses in town, I was unable to procure any sensible quantity of this alkali "From what has come under my own observation," says Dr. Christison, "the extracts of hemlock may become feeble, if not even inert, in one of two ways,—either by the heat being continued after the concentration has been carried to a certain extent, or by long keeping. On the one hand, I have always observed, that from the point at which the extract attains the consistence of thin syrup, ammonia begins to be given off in abundance, together with a modified odour of conia. And, on the other hand, I have found extracts, which were unquestionably well prepared at first, entirely destitute of conia in the course of a few years,—a remark which applies even to the superior extract prepared by Mr. Barry, of London, by evaporation *in vacuo*. The mode of ascertaining the presence of conia is simply to triturate the extract, or other preparation, with solution of potassa, upon which an odour of conia is given off."

The *tinctura conii* of the London Pharmacopœia is prepared by digesting the dried leaves with some bruised cardamoms in proof spirit. Its dose is half a drachm to a drachm. Geiger, however, observed that the dried leaves of hemlock do not contain conia, and therefore this, like the powder and extract, is an objectionable preparation.

One of the best pharmaceutical preparations of hemlock would probably be an *alcoholic tincture of the bruised ripe fruit*. Dr. Christison says he procured from two hundred and twenty grains of the alcoholic extract of the ripe seeds (mericarps) upwards of five grains of colourless hydrate of conia.

A *poultice of hemlock* is sometimes employed as a soothing anodyne application to cancerous, scrofulous, and venereal ulcers. There are several modes of making it. The directions of the London College are, to mix two ounces of the extract of hemlock with a pint of water, and then add as much linseed meal as will make a poultice. The Dublin College direct it to be made by adding the powdered leaves to the strained decoction of the dried leaves. Some prepare it with the unstrained decoction and linseed meal; and occasionally the bruised leaves are used as a poultice.

The *ointment of hemlock* is ordered to be prepared, in the Dublin Pharmacopœia, by boiling the fresh leaves of hemlock in prepared hog's lard. It is employed as an anodyne application to foul, painful, and cancerous sores, to glandular and scirrhous swellings, and to painful piles. An extemporaneous substitute may be prepared with lard and the extract of hemlock.

Antidotes. — No chemical antidote is known for hemlock, though it is not improbable that an infusion of galls might be serviceable, as mentioned for *conia*. The first object, therefore, is to evacuate the poison from the stomach; this is to be effected by the same means as directed for poisoning by opium. If the poison be suspected to have passed into the bowels, a purgative is to be administered, unless diarrhœa have come on. The subsequent treatment will depend on the symptoms: blood-letting is frequently required, to relieve the congested state of the cerebral vessels. Opium is generally prejudicial. Artificial respiration may be resorted to in extreme cases.

Recognition in medico-legal inquiries. — Hemlock can only be properly recognized by its botanical characters, already described: yet its remarkable odour may sometimes be of considerable assistance in recognizing the plant or its preparations; nor is the fact to be lost sight of, that potash developes a strong smell of conia. In some cases it might be possible to obtain some conia by distilling the alcoholic extract of the suspected substance with water and caustic potash.

MENISPERMACEÆ.

In this family there are several substances requiring notice: I shall commence with

Cocculus palmatus.

History. — Franciscus Redi, in 1685, is the first writer who mentions the root of this plant: he praises it as an alexipharmic or antidote for poisons. Cartheuser afterwards examined it: but Dr. Thomas Percival gave the best account of it in his Medical Essays, published in 1773. This root has been known by various names, such as *Calumba, Colombo, Calomba,* and *Colomba*. It was at first supposed to come from Colombo, a town of Ceylon, and from which it was said to derive its name. But it is now known to be the produce of Mozambique; and we are told its African name (from which our designation is derived) is *Kalumb*,—which the Portuguese spell *Kalumbo*, the *o* in their language being mute.

Botanical history.—The Calumba plant is diœcious, and grows naturally and in great abundance in the thick forests that cover the shores of Oïbo and Mosambique on the east coast of Africa, as well as inland for fifteen or twenty miles. Its root is perennial, and consists of several fasciculated, fusiform, fleshy tubers. Externally it is covered with a brown warty epidermis; internally it is of a deep yellow colour, odourless, and of a very bitter taste. The stems are annual, herbaceous,

and twining,—in the male plant being simple, in the female branching: at the lower part they are beset with long glanduliferous hairs. The leaves are alternate, nearly orbicular, deeply cordate, from five to seven lobed, wavy on the margin, hairy on both sides, and supported by long, hairy footstalks. The flowers are small, and are arranged in racemes: those of the male plant consist of a calyx, composed of six ovate sepals, arranged in two rows or series, a corolla of six green petals, and six stamina. The female flowers consist of a calyx, composed of six sepals, a corolla of six petals, and three pistilla. The fruit is drupaceous.

Fig. 155.—*Cocculus palmatus.*

From the preceding description it is evident the plant belongs to the class *Diœcia*, order *Hexandria*, in the Linnean arrangement.

Preparation.—The natives never cultivate the plant, the spontaneous produce being sufficient. The root is dug up in March, cut in slices, strung on cords, and hung up to dry in the shade.

Physical properties.—Columba root is met with in flat circular or oval pieces, of from half an inch to three inches diameter, and from one to three or four lines thick. It occurs also in cylindrical pieces of from one to two inches long. The epidermis covering the sides of the pieces is of a yellowish-grey or brownish colour, smooth or irregularly rugous. The transversal surfaces are of a greenish or greyish-yellow colour, depressed in the middle from the great shrinking of the medulla in the drying process, and consist of three or four concentric layers. The outer or cortical portion varies in thickness, but is usually about two or three lines thick. It is separated from the ligneous portion by a dark-coloured layer, not exceeding a hair in thickness. The internal or medullary portion is light, spongy, and shrunk. The radiating lines observed on the transversal surfaces offer some resemblance to those of the root of Cissampelos Pareira. The odour of Calumba is faint, but somewhat aromatic: the taste aromatic, and very bitter. In the larger and thicker pieces small holes are occasionally observed, which have been made for the convenience of drying.

Chemical composition.—The chemical properties of Calumba root were first examined by Cartheuser, afterwards by Josse and Percival; and in later times by Pfaff, Planche, Buchner, and Wittstock.

The following are the constituents of the root, according to two chemists:—

	Planche.	Buchner.
Bitter matter	13	10 to 12
Animal matter, soluble in water and not in alcohol	6	0
Yellow resinous extractive	0	5
Volatile oil	a trace	0
Wax	0	2
Gum	9	3 to 4
Starch	33	30 to 35
Vegetable medulla	0	17
Woody fibre	39	12
Water	0	9 to 10
	100	97

In the ashes of the root, Planche found calcareous and potash salts, oxide of iron, and silicic acid.

The non-existence of tannic or gallic acid in this root, is shown by the absence of any change when sulphate of iron, tartar emetic, or gelatine, is added to an infusion of it. Unlike many other roots, Calumba does not contain any free acid for its infusion does not redden litmus.

Odorous principle.—The odour of the root has by some been supposed to depend on a

volatile oil, traces of which are said to have been obtained by Planche. Water distilled from the root possesses the odour of the latter.

Active principle of Calumba.—The active principle of Calumba, whatever may be its nature, is, as it exists in the root, soluble in both water and alcohol.

According to Planche it is a *yellow bitter matter*, which he says is soluble in water and alcohol, and gives no precipitate with either the salts of lead or with infusion of galls.

Some have suspected the existence of a *vegetable alkali*, and in favour of this opinion two facts have been adduced—namely, the precipitate caused by an infusion of the root with an infusion of galls, and the solubility of the active principle in alcohol. But these reasons are hardly sufficient. Starch, which exists in Calumba, gives, with infusion of galls, a precipitate. The late Dr. Duncan suggested that the active principle might be of the nature of *picrotoxia*, as the plants which yield calumba and cocculus indicus belong to the same genus. This opinion has also been expressed by Buchner, who endeavoured to strengthen it by experiment. One grain of the ætherial extract, purified from the waxy matter by repeated solution in water, was applied to a wound in a rabbit, and in ten hours proved fatal to the animal. In another similar experiment, three grains were not fatal. In the American translation of MM. Edwards and Vavasseur's "*Manuel de Matière Médicale*," we are told that Dr. Conwell has obtained an alkaline principle which he terms *Colombia*.

Wittstock states that he procured sixty grains of a crystallized, odourless, very bitter substance, which was neither alkaline nor acid, from eight ounces of Calumba root. This substance he has termed *Columbine*. It is fusible; very slightly soluble in water, alcohol, æther, or the volatile oils; but dissolves in acids and caustic alkalies; its best solvent being acetic acid. It is unaffected by metallic solutions, and by infusion of galls. If this be the active principle of Calumba, it is clear that its properties must be modified by the other substances found in this root.

Starch.—This, as will be evident from the analyses of Planche and Buchner, forms a considerable portion (about one-third) of Calumba root. Its presence is readily detected by iodine; if the root be moistened with water and then touched with the tincture of iodine, a black spot is immediately produced. The infusion or decoction of Calumba becomes blue when iodine is added to it. The large quantity of starch in Calumba root renders it an easy prey to insects.

False Calumba; American Calumba; root of the Frasera Walteri.—The Frasera Walteri, a plant belonging to the natural order *Gentianaceæ*, and to class *Tetrandria*, order *Monogynia*, in the Linnean arrangement, is a native of the southern and western portions of the United States, and is very abundant in Arkansas and Missouri. From the resemblance of the root, both in appearance and medicinal properties, to that of the Cocculus palmatus, it has received the popular name of *American Calumba*.

Dr. Duncan states, that a *false Calumba root*, the produce of this plant, has been imported from the United States into Liverpool; but I have never met with any samples of it in this country.

Some years since, it was introduced into France, and sold for genuine Calumba. Guibourt pointed out its distinguishing characters; he called it *fausse racine de Colombo*, and from an erroneous notion of its origin, it was sometimes called *Colombo d'Afrique*.

It is said to resemble very strongly the true Calumba; but the samples I have received from France, would not, in my opinion, be confounded in this country with the real calumba. The pieces very closely resemble those of gentian root.

The root of Frasera Walteri may be readily distinguished from the true Calumba by the following characters:—

1. It undergoes no change when touched with tincture of iodine; hence it contains no starch.

2. It becomes blackish green when treated with sulphate of iron, and slightly precipitates gelatine; showing that it contains tannic acid.

Now I have already stated and demonstrated that the true Calumba contains about one-third of its weight of starch, and gives no indications of containing tannic acid.

The root of Frasera Walteri is officinal in the Pharmacopœia of the United States. Its effects and uses are like those of gentian.

Physiological effects.—Calumba is an excellent tonic; it promotes the appetite, assists the digestive process, and improves the quality of the secretions from the gastro-intestinal mucous membrane. By some it is considered as specifically influencing the liver. It is not a stimulant; for Dr. Percival took a scruple of it on an empty stomach, but did not observe that it had the least effect on the regularity, fulness, or velocity of the pulse. In another experiment he swallowed half a drachm: in ten minutes his pulse was fuller, and slower by three beats, and continued so for three-quarters of an hour. In consequence of the quantity of starch and gum which it contains, it is ranked by some pharmacological writers among what they term mucilaginous tonics, in which

list they place the Cetraria islandica and Simaruba bark. From both these, as well as from quassia, it is distinguished by its aromatic properties. In some respects (namely, in its tonic and aromatic qualities) it approximates to rhubarb, but is devoid of the purgative and astringent properties of the latter. Its want of astringency distinguishes it from the astringent tonics, as cinchona. Full doses of powdered Calumba, given when the stomach is very irritable, cause vomiting. It does not appear either to constipate or relax the bowels. We are not acquainted with the effects of very large doses of Calumba; but if Buchner's experiments, already detailed, with the extract of this root, be correct, it is a dangerous remedy. Further observations, however, are required in order to confirm his statements.

Uses.—The following are the principal uses to which Calumba is applied:—

1. *To check vomiting.*—The power possessed by Calumba of checking vomiting has long been remarked. It is, however, principally observed in those cases of what we may call sympathetic vomiting; that is, vomiting depending on the sympathy existing between the stomach and some distant organ, as the uterus or kidneys. Thus it is frequently serviceable in the nausea and vomiting which frequently occur during pregnancy; in children, when vomitings take place during dentition, Calumba is oftentimes serviceable, especially when combined with chalk or magnesia; occasionally it gives temporary relief in the vomiting arising from disease of the kidney. There are several other cases in which its tendency to allay sickness is observable, as in bilious colic and habitual vomiting. I have seen the most satisfactory results from the combined use of infusion of Calumba and effervescing draughts (composed of citric acid and bicarbonate of potash), in those occasional vomitings especially observed in delicate females, and which are commonly termed bilious attacks. The violence and continuance of the vomitings are diminished by these remedies; and after the attack, the continued use of the Calumba has reduced the frequency, and in some cases prevented the occurrence of future attacks.

In order to satisfy himself of the antiemetic qualities of Calumba, Schwilgue gave it when vomiting had commenced, after the use of emetic tartar or ipecacuanha. "Frequently, but not constantly," says he, "I have seen the vomiting arrested. I have often administered the Calumba along with the emetic tartar and ipecacuanha: vomiting in general occurred, but it was milder, and was more slowly produced."

2. *In diarrhœa and dysentery.*—The German name for Calumba root is *Ruhrwurzel*, that is, *dysenteric root*. You would, therefore, be led to imagine that Calumba had some specific influence in this disease. That it is frequently serviceable there can be no doubt, but not in that degree to warrant the name applied to it. It is adapted to the latter stages of dysentery, when all the inflammatory symptoms have subsided. In habitual diarrhœa it is exceedingly useful, when there are marks of inflammation.

3. *In a languid state of the stomach*, attended with want of appetite, indigestion, nausea, and flatulence, Calumba root, says Dr. Percival, is extremely beneficial. The experience of the last sixty years has fully justified the praise bestowed on it by this eminent physician. It is of all tonics the least likely to disagree with the stomach, and is frequently tolerated when any other would be immediately rejected.

Administration.—It may be given in *powder* in doses of ten grains to a scruple or half a drachm. But the most eligible form for exhibiting Calumba is that of *infusion*, in doses of one or two fluid ounces. The strength of it is, according to the London College, one drachm of the root to four ounces of boiling distilled water. It very speedily undergoes decomposition, owing, as Planche says, to the substance which he terms animal matter. The *tincture of Calumba* is a very useful adjunct to the infusion; or it may be taken alone in doses of one or two drachms.

COMPARATIVE MORTALITY OF THE RICH AND OF THE POOR.

To the Editor of the Medical Gazette.

Sir,

In the beginning of last year my notice was attracted by a paragraph which appeared in all the newspapers, and afterwards in your Medical Gazette, announcing the new doctrine of Dr. Casper, who had endeavoured to establish the superior longevity of married persons, male and female; whereupon I sent you a letter (see Medical Gazette, March 19, 1836), showing that no such result was deducible from the Mortuary Register of S. Sulpice (inserted by Deparcieux), on which Dr. Casper founds his main argument; and, moreover, that the same work of Deparcieux contains a complete refutation of it, in the recorded ages of nearly 10,000 monks and nuns who were bound to celibacy.

Probably I should not have concerned myself with Dr. Casper's bold speculation, had it not threatened serious injury to civilized Europe by the virtual discouragement of life insurance and valuation of leases, and other survivor

ships to an immense amount; for the contingency of marriage is evidently incalculable, and yet, according to Dr. Casper, is an element which ought to be taken into account in all such calculations.

Dr. Casper's *Lebensdawer* has since found its way into England, and another of his speculations has attracted public notice, by a contrast of the duration of life among the rich and among the poor, which he exhibits in a table, and also by lithographed lines of life, accompanied by a commentary of his own.

"We cannot see without astonishment," says Dr. Casper, "that the comforts enjoyed by the rich extend the duration of life itself. Compared with the poor, twice as many of the rich attain to the age of 70; three times as many the age of 85; and four times as many the age of 90. In other words, the average duration of the life of the rich is 50 years, of the poor little more than 32 years; a difference of 18 years of life between the prince and the pauper."

This result, which excites the astonishment of Dr. Casper, may reasonably excite in others attention to the materials on which it is founded; and herein the novelty of having recourse to genealogical tables, as printed in an almanack, is first to be noticed. Individuals who die unmarried, or without issue, have little to do with the family tree, being always noticed significantly as S. P. (*sine prole*), and, unless personally conspicuous in family occurrences, are not likely to appear in any transcript of genealogy, much less in an almanack; the printer of which, of course, aims at brevity in his compilation. Much less likely to be recorded, or even noticed, are those who die in infancy and childhood; and accordingly Dr. Casper's table assigns no more than 44 deaths among 713 children under ten years of age. But there is no instance in any other published table of mortality, of less than one-third dying in the first ten years of life—that is, 238 in 713, or 333 in 1000; and Dr. Casper cannot, therefore, be dissatisfied if, in favour of the select class, and for the sake of obvious calculation in a subsequent table, their mortality is assumed to be 287 in 1000, instead of 62 in 1000, as assigned in his table *.

In the foregoing extract from Dr. Casper, we are told that the expectation of life among the rich is 50 years; so that the total number of years lived by his 713 individuals must have been

$$[36006{\cdot}5.\ \frac{36006{\cdot}5}{713} = 50{\cdot}5 - {\cdot}5 = 50\ \text{yrs.}]$$

But if his radix, by adding 243 to his 44 deaths, becomes 1000 instead of 713, and the number of years lived (by a reasonable assignment of three years of life to each of the 243 added individuals dying under ten years of age) becomes 36,735, the result assigns to the rich no more than $36\frac{1}{4}$ years as their average duration of life, instead of 50 years—

$$[36006 + 729 = \overline{1000}\ 36735 = 36{\cdot}735 - {\cdot}5 = 36\ 235\ \text{yrs.}]$$

It is true that the average life of the select class in Germany (as elsewhere) probably exceeds 40 years; but the anomalies in Dr. Casper's entire table are such as invalidate any result deduced from it,—as he himself will candidly confess on comparing it with the Law of Mortality in Belgium according to M. Quetelet, and with that of Sweden, which differ but little from our English tables; but I prefer them, as nearer to Germany, as well as being founded on very ample materials.

Age.	Law of Mortality in each period.		
	Dr. Casper.	M. Quetelet, 1832.	Swedish, 1795.
30—35....	31	29	29
35—40....	41	29	30
40—45....	51	30	35
45—50....	48	31	37
50—55....	66	36	41
55—60....	47	40	47

* It is remarkable that Dr. C. himself (p. 39 of his *Lebensdawer*) shows, that, in Berlin, 461 males in 1000, 469 females in 1000, die in the first ten years of life. This mortality may exist in a populous city; but the superiority of male life is unexampled.

Your readers, in examining the above columns, are requested to understand that they are all worked on the common radix of 1000; and the irregular aberration of Dr. Casper's column from the other two succeeding columns, sufficiently proves that, from whatever cause, the Genealogical Almanack is not a secure basis on which to construct any calculation of the expectation of life; and I request attention to the remarkable fact, that the select class of Dr. Casper exhibits, in some instances, a much greater mortality between the ages of 30 and 60 years than the entire population of Belgium and Sweden,—a fact entirely subversive of his argument, even supposing his data to be of any value.

I know not whether, after this exposition, I am justified in asking the further attention of your readers to Dr. Casper's column exhibiting the mortality of the poor of Berlin,—of those who, in case of disease, are attended by medical officers at the expense of the public. The poor do not often accept such aid unless attacked by a dangerous disease; and to rely on the duration of life among such persons as a general rule, is quite as novel as the application of a Genealogical Almanack in the case of the rich. I really cannot imagine by what process of ratiocination Dr. Casper can advisedly ascribe to patients who die in a public hospital the same duration of life as to others generally, many of whom either escape disease or survive it, and die of old age. I forbear to examine into the aberrations of a table founded on such an assumption. Dr. Casper has sufficiently approved himself, by his medical statistics, and his *Lebensdawer*, to be an industrious collector of information, and has displayed his results in well-arranged tables and diagrams; but his good qualities will not be conducive to the public good until he has banished from his mind that love of the marvellous which, once admitted, puts to flight all other considerations.

I can very well understand, perhaps I have myself felt in my own experience, that when the mind has been led into a hopeful investigation, in the progress of which the same mind happens to discover its own error of induction,—or when an impossible or absurd result of calculation demonstrates the unsoundness of the materials on which it has proceeded,—I can understand that in such a case it may cost the inquirer a pang in destroying the abortion and rejecting the intellectual labour of days or weeks. But this kind of sacrifice is absolutely required by the moral sense, which is conventionally ascribed to all those who undertake to instruct mankind in useful knowledge; for to say that such knowledge is not advanced by the publication of error, does not express the whole truth: the mischief is of a positive description, because the reader is thereby drawn aside from better occupation, and his time must be afterwards expended in refuting or perusing the refutation of the unfounded speculation which has unadvisedly been placed before him.

Still worse will be the result, if those who rely on an accredited author are misled into an unlimited train of error practically injurious to mankind. Dr. Casper himself furnishes an example of this, when he imputes to marriage consequences which, unrefuted, would go near to abolish all life assurances; and, in the present instance, into a speculation subversive of amity and good will between the different grades of human society; and regarding which I shall only add, that as the population of England and that of Prussia have increased at the same rate since the peace of 1815, the difference of condition between the rich and the poor cannot be very unlike in the two nations; and that in England the advantage of the select class, of those who are concerned in pecuniary transactions with government, is not very great. In the opinion of Mr. Finlaison (whose calculations on the lives of upwards of 20,000 public annuitants are known to be unimpeachable), the expectation of life throughout the entire population of England, in the year 1821, had reached that of the select class in the year 1786,—a fact which would be incredible, unless we knew that the annual number of deaths in England did not increase during thirty-six years (from 1780 to 1815), although the population increased from 7,814,000 to 11,525,000, or 47 per cent., during that time. It is true that this remarkable prolongation of human life may have extended in some degree to the select class; but it would be outraging probability to estimate the life of the select male as more than equal to that of females generally in all classes of

society. The experience of the Equitable Assurance Society (published in 1834), where a great majority of the insured are males, confirms Mr. Finlaison's calculations.

This mention of a Life Assurance Office reminds me that I ought not to conclude this letter without stating, that in the opinion of those most conversant in life assurances, the usual certificates of health required of the insured, and upon which Dr. Casper places great reliance, are fully balanced and counteracted by insurances effected by individuals conscious of concealed disease, and sometimes, though (we may hope) rarely, by the flagitious practices of those who insure lives which they intend to shorten afterwards.—I remain, sir,

Your obedient servant,

JOHN RICKMAN.

Feb. 14, 1837.

ERRORS OF LAENNEC AND OTHERS

RESPECTING THE

REGIONS OF THE CHEST.

To the Editor of the Medical Gazette.

SIR,

SOME apology may be necessary for bringing the following subject so often before your readers; but if they consider how much it has been practically misunderstood, and the perplexity and errors which have been the result—if they consider the respectable authorities who have contributed to the spread of incorrect opinions concerning it—if they consider what an apparently fair ground the consequent mistakes have furnished to many, for treating the physical signs with neglect or disdain—and finally, if they consider that the exposure of error often facilitates the establishment of truth, they will perhaps feel disposed to view any efforts to throw light upon it with some degree of indulgence.

I might have avoided much repetition in the notice of Laënnec's regions, by putting under the same head those that yield similar results; but I have preferred the risk of being tiresome to that of being charged with intentional, or unintentional, misrepresentation of his views. With regard to other frequent repetitions I cannot offer so legitimate an excuse.

In his "Traité de l'Auscultation médiate," Laënnec has given a division of the surface of the chest into different regions, with the characters of sound on percussion which, according to him, belong to each. There are, in his account of these regions and sounds, some errors, either direct or implied, which I shall now endeavour to point out, arranging my remarks under a few heads.

He says, first, that in the mammary region, which commences "au-dessous de la quatrième côte et finit à la huitième," percussion cannot be employed "chez la plupart des femmes," and that in men it seldom yields as much sound as the "région antérieure-supérieure," *on account of the thickness of the lower edge of the great pectoral muscle.*

A much better explanation of this comparative dulness will be found in the position of the heart and liver, the latter of which is, with few exceptions, near the surface in the greater part of the said mammary region, on the right side, and very frequently also on the left.

The circumstance of Laënnec not having taken the heart into consideration in his account of the regions of the chest, has been pointed out by M. Andral.

2. That in the "région sous-mammaire," which commences "au-dessous de la huitième côte," and ends "au rebord des cartilages des fausses côtes," the sound is almost always "peu clair" on the right side, "à cause du volume du foie." That on the left side, on the contrary, it is often clearer than natural, and almost tympanitic, from distension of the stomach by gases.

3. That in the "région latérale," which commences "au-dessous de la quatrième côte," and ends "à la huitième," the sound is always clear on the left side; that "souvent il l'est notablement moins" on the right; "ce qui indique toujours que le foie remonte plus haut qu'à l'ordinaire, et que le poumon droit refoulé en haut, en devient un peu plus dense et moins rempli d'air. *Car le foie ne remonte jamais réellement, au moins lorsqu'il est sain, plus haut que le niveau de la sixième ou cinquième côte au plus.*"

It is to be hoped that Laënnec is mistaken when he asserts that the healthy

liver " ne remonte jamais plus haut" than the level of the fifth rib; as, on that supposition, diseased livers are as much the order of the day amongst us, as was ever dreamed of by the strongest partizans of hepatic affections.

The general rule, the *more* than *general* rule, is, that the liver *does* rise above the level of the fifth rib*, which explains very well the fact, that the sound in the " région latérale, à droite," is not only often, but almost always, especially in its lower parts, " notablement moins clair qu'à gauche," unless there is disease on the left side diminishing the natural quantity of air, or emphysema or pneumo-thorax on the right†.

4. That in the " région latérale-inférieure," which commences " au-dessous de la huitième côte," and ends " au rebord des cartilages des fausses côtes," the sound is, " par la raison que nous venons d'exposer," often " tout à fait mat" in the " région latérale-inférieure droite," and that it is almost always " beaucoup moins sonore" than in the left; that in this last, on the contrary, the sound is often clearer than natural when the stomach is distended by gases; and that " cette résonnance claire peut encore avoir lieu en pareil cas, lors-même que la partie inférieure du poumon gauche serait engorgée, ou qu'il existerait un épanchement dans la plèvre de ce côté."

If we consider what is said and what is omitted, concerning the stomach, in the account of the regions " mammaire," " sous-mammaire," " latérale," and " latérale-inférieure," it will be evident, I think, that there is a remarkable oversight. We are taught that, in the left " région sous-mammaire," the distension of the stomach by gases produces a sound clearer than natural, and almost tympanitic; and also, that in the left " région latérale inférieure," the distension of the stomach by gases produces a sound clearer than natural. This is perfectly true; but when compared with the total silence as to the stomach producing any effect on the sound in the " région mammaire," and the " région latérale," we may fairly infer that Laënnec supposed its influence on the sound not to extend above the eighth rib in these two regions, even when the stomach was distended by gases.

Now the fact is, that when the stomach is distended by gases, it affects the sounds as high up as the sixth, the fifth, or even the fourth rib.

The cases in which the stomach gives its sound no higher than the eighth rib are mere exceptions, and that not only when there may be said to be *distension* of the stomach by gases, but in the ordinary state of things.

It is extraordinary that Laënnec should take no notice of the intestines in this account, although their presence high up often produces a very marked increase of " sonoreité." The circumstance of his stating that in this lower lateral region, the stomach distended by gases might produce a clear resonance, even though the lower portion of the left lung should be " engorgée," or though there should be an " épanchement" in the pleura of that side, is not calculated to diminish our surprise, when compared with his want of knowledge as to its influence high up.

He mentions, however, that in the " région dorsale inférieure," which commences " à la hauteur" of the inferior angle of the scapula, and ends " à celle de la douzième vertèbre dorsale," the sound on the left side often presents over the whole extent of that region " la sonoreité trompeuse" before mentioned, and which he attributes to the stomach being distended by gases.

It should be borne in mind that Laënnec scarcely* employed mediate percussion; but the points on which I have ventured to criticize him might, I think, have been made out by immediate percussion, especially as he was unrivalled in that respect.

In the " Notes et Additions au Traité de l'Auscultation médiate de Laënnec," by Mons. Meriadec Laënnec and Mons. Andral, this latter thus expresses himself regarding Laënnec's account of the sounds of the chest, with the exception as to the heart above mentioned :— " Dans cette appréciation, si nette et si vraie, des différences de sonoreité que présentent les parois thoraciques dans les divers points de leur étendue," &c.

* This is not offered as an original remark, *anatomically* speaking.

† The preceding remarks have solely reference to the level of the fifth rib as the standard of the healthy liver; but do not Laënnec's words imply that he considered this as the exception, and the level of the sixth as the utmost average height ?

* I am not quite sure whether he employed it at all.

The almost unqualified praise which M. Andral gives on this occasion is perhaps quite as surprising as the original errors of Laënnec, which he thus adopts as his own.

I shall now make a long quotation from M. Piorry, which will serve to show that *mediate percussion* did not save him from error as to the ordinary height of the liver and its relative situation. "A droite et lorsqu'après avoir percuté le haut de la poitrine, on explore plus inférieurement, on trouve ordinairement à quelques pouces au-dessous du mamelon, un peu plus de résistance au doigt et de la matité. Cela n'est bien sensible qu'à l'aide d'une percussion assez forte; à mésure qu'on descend la dureté et le son obscur deviennent de plus en plus apparens, de telle sorte que tout à fait en bas, dans le thorax, se retrouvent les caractères plessimétriques dus à la présence du foie; c'est, en effet, cet organe qu'on rencontre sur ce dernier point*."

The opinion that you must ordinarily descend "quelques pouces" below the nipple before you find "un peu plus de résistance au doigt et de la matité," and that "cela n'est bien sensible qu'à l'aide d'une percussion assez forte," is so utterly contrary to what almost daily observation teaches me, that it might, combined with the opinions combated above, lead to the supposition of there being some difference in the structure of the inhabitants of Paris and London with regard to the height of the liver and the diaphragm generally.

At page 162 of the same work we are told that it is in general "à un ou deux pouces au-dessous du mamelon droit," that the liver commences in the greater part of mankind, and that its lower edge terminates "au rebord costal."

In connexion with M. Piorry and mediate percussion, I may take the opportunity of stating, that the practice of percussing on one of the fingers was first proposed by Dr. Skerrett, who, with myself and several others, attended the early public demonstrations of M. Piorry in the dissecting-rooms near La Pitié. I speak from personal and positive knowledge of the circumstances; and I recollect perfectly his urging the subject on the attention of M. Piorry, who appeared to me at the time indisposed to entertain the proposal, and who seems subsequently to have forgotten the particular individual with whom it originated.

It has been mentioned to me by gentlemen who have attended the clinique of M. Louis, that he gives a rule for estimating the average height of the liver; but their information is not sufficiently positive and precise to justify me in venturing to give any definite opinion about it.

In those individuals whose diaphragm on the left side runs at a considerable distance from the ribs, some tact in percussion is requisite, in order to make the stomach or intestines *tell* through the lung high up*. Sometimes, too, the liver, extending far to the left, renders the stomachal or intestinal sound from percussion in front distant and feeble; still, with a certain degree of skill, it is often possible to ascertain, not only through a portion of liver, but also through a portion of the heart, when this organ lies in a slanting direction on the diaphragm, the intestinal or stomachal sound behind them. I may mention, that in such cases also the kind of revolving or tilting motion alluded to in a former number†, will, even through the heart, frequently indicate the height of the diaphragm behind it, and consequently that of the stomach or intestines.

An objection is sometimes made, that the height of the diaphragm varies so much during respiration as to render fallacious any practical conclusions attempted to be drawn from a supposed knowledge of it at any given moment.

To this I would answer, 1st, That the variations during the ordinary act of respiration are too slight to lead to any practical mistake. 2d, That even in strong abdominal inspiration the movement is not one of much depression, but of the tilting or revolving character above mentioned; and that this last motion, properly understood, renders more easy a knowledge of the diaphragmatic level. 3d, That opinions drawn from living animals whose abdominal parietes have been cut through, are not conclusive on the subject.

In a note to his communication "On the theory and practice of Percussion as a mode of Diagnosis‡," my friend Dr.

* Du procédé opératoire, &c. p. 53.

* In speaking of the stomach or intestines, I do not mean to imply that they cannot exist high up together.

† Dec. 10, 1836.

‡ Medical Gazette, Jan. 21, 1837.

Williams, in speaking of the height to which the diaphragm rises in the chest, represents me as having taken great pains to investigate this matter. Perhaps I may be excused for stating that I have taken great pains, not to ascertain simply the height of the diaphragm, but those marks and movements, whether appreciable by sight or touch, which indicate in different individuals, not only the height of the diaphragm, but, to a certain extent, the distance at which it lies from the ribs in different parts of its course; thereby rendering it possible to foretell in any particular case, with considerable practical accuracy, the degrees of resonance on percussion, and the state of the respiration in those parts of the chest which lie below the diaphragmatic level, and of course to estimate any marked deviation from the healthy state.

If, on the other hand, the inquiry has been begun by the general and local signs, this method may be found useful in confirming or invalidating the conclusions drawn from those sources. The difficulty of describing the indications furnished by sight or touch as to the course of the diaphragm, deters me from attempting it at present, but I hope to be able to do so before long with some degree of success. In the meantime, any one who may feel inclined to investigate the subject practically, will meet with a corresponding disposition on my part.

By the remark, that the fact of the diaphragm rising thus high up in the chest had been little attended to by physicians, Dr. Williams did not, I believe, mean to convey an assertion that he had ever known it to be attended to either much or little by any physician or physicians.

The perusal lately of an article by Dr. Stokes, in the 7th number of the Dublin Journal of Medical and Chemical Science, induces me, in the hope of preventing the recurrence of such a mistake, and dissipating a little of the obscurity which sometimes hangs about such cases, to make some remarks, and throw out some conjectures which I should otherwise have reserved for further examination.

In that article there is mention made of an operation for empyema, in which the diaphragm was pierced, from the instrument having been introduced too low down. It has been for some time an object with me to ascertain how far that lateral depression* which, in the majority of individuals, indicates the level of the diaphragm on the corresponding side, would be affected by consolidation of the lungs or effusion into the chest. The cases, whether of tuberculization or hepatization, which I have had an opportunity of examining, appear to justify the positive conclusion that this depression is not changed by those diseases, and that it there also indicates in general the diaphragmatic level. With regard to effusion into the chest, I wish to be understood as speaking with hesitation, but on the one hand some cases of the kind that I have seen appear to favour the idea that either the lateral depression is not affected, or that it is merely thrown a little higher up; and on the other, I am not aware of having met with a single exception to this rule. If this opinion proves to be correct, it will suggest the practical caution of not introducing the instrument below such depression, unless there shall be circumstances which prove that the diaphragm is displaced downwards to a sufficient degree.

In the case mentioned by Dr. Stokes, the diseased side at the time of the operation was in a state of contraction, and it is possible that this circumstance may cause some doubt and difficulty. However, if it is recollected that as a general rule the depression is a little higher on the right side than on the left, an examination of its height on the sound side may lead to a probable conclusion as to its natural height on that which is diseased.

There is one point which I must not omit to mention. Although it may be inferred that the diaphragm, unless displaced downwards by disease, rises as high as the lateral depression, it cannot be inferred that it rises no higher. I would venture to propose an hypothesis which will go far, I think, towards explaining a great number of cases, and reconciling some apparent contradictions. It is this; that there is in every individual a depression on each side corresponding to the natural height of the diaphragm on that side, and that this depression remains, although from some cause, such as diseased liver, effusion into the abdomen, &c. the diaphragm should be either temporarily or permanently thrown higher up than

* Med. Gaz. Dec. 10, 1836.

natural. In this last case, however, the diaphragmatic level is, I think, appreciable to sight or touch by marks or movements which require further investigation before I attempt to speak very positively about them. If, however, it should happen, as I am inclined to believe, that the revolving or tilting motion still accompanies the diaphragm at this unnatural height, it may become a valuable sign in this respect.

As I am now in the region of conjecture, I will suggest another.

If the revolving motion is directly connected with the presence of the diaphragm, such motion will not be perceptible when the diaphragm is thrust down, or will, perhaps, by the highest points at which it can be felt, indicate that the diaphragm exists at the same height within a moderate distance from the ribs.

I have had some thoughts of inquiring how far our own authors on auscultation and percussion have adopted the errors of Laënnec commented on above, but the task would be a delicate one, and those who have their works can easily decide this question for themselves. It would be rash in me to assert that no work of the kind contains correct views on this subject, but those that I am acquainted with afford proofs, in this as in too many other respects, of the facility which the great talents of Laënnec so often met with, in misleading his faithful followers.

Your obedient servant,

EDWIN HARRISON.

Grove Terrace, Lisson Grove.
February 13, 1836.

NOTICE OF THE INFLUENZA OF JANUARY AND FEBRUARY, 1837.

To the Editor of the Medical Gazette.

SIR,

IT is reasonable to suppose that some such disease as the influenza has existed in all ages, yet no tolerable account is generally understood to be extant of any of its visitations before the sixteenth century, nor in England before 1658, (Willis de Febribus, c. 17.) nor any distinct notice whatever of its existence in very early times. Yet it is no unimportant disease now, and must have been, if it happened at all, much more important still in the darkness of Grecian and Roman civilization, and in the middle ages. For there is undoubtedly at present a much greater average vigour of health and tenacity of life than were enjoyed of old, and there is a greatly improved knowledge of the physiognomy and laws of disease, and, of necessary consequence, a greatly diminished mortality attending epidemics. Doubtless the short duration of its more urgent symptoms, and its comparatively small mortality, when uncomplicated with organic disorder, have contributed very much toward the inattention that influenza has experienced at the hands of the earlier writers, and perhaps in some measure justified likewise that inattention. If ague were still epidemic in Britain every spring and autumn, and dysentery and cholera common in harvest, and plague a frequent visiter, and confluent small-pox, as they have been within little more than a century and a half or so of the present year; in that case I make no doubt epidemic catarrh would still, as heretofore, appear to most men too insignificant for particular notice. Happily we are now, at least in this country, little liable to be deafened by the roar of those great guns, and can note the report of the small arms. Accordingly, within the last century, more especially within the last 50 or 60 years, very numerous notices have appeared, by practitioners in all parts of these islands, of irruptions of influenza. Conductors of influential periodicals also, as the editors of the Medical and Physical Journal, (vol. 9.) have instituted extensive inquiries on the subject amongst their correspondents; and the Medical Society of London (Mem. Med. Soc., vol. 6.) has collected a valuable mass of communications from various members of their body; while spirited individuals, especially Dr. Beddoes and Dr. Fothergill, (Med. Phys. Journ. vol. 10, and Med. Obs. and Inq. vol. 6.) have exerted themselves successfully for the same laudable purpose. By such inquiries much information has been obtained, in addition to what was previously recorded, as to the pathology, ætiology, and treatment of influenza; yet much remains uncertain, or unknown, regarding its causes, remote and proximate and its *methodus medendi* is still unsettled in some points of importance; so that it is to be hoped that the observers of the epidemic just expiring will not suffer their experience to be lost by neglecting to be put on re-

cord whatever original facts they may possess, throwing new light on the disease, or capable of deciding disputed, or clearing up obscure, points in its history. The following is a summary of what has been observed in the practice of the St. Marylebone Infirmary, with regard to the epidemic just disappearing.

Grand Total, from 30th December, 1836, to 10th February, 1837.

1. Admissions into the Infirmary, including all cases, surgical and medical, during the above period..... 465.
2. Admissions on the out-door list, to be visited at home, during the same period ..... 661.
3. Out-patients, mostly severe cases, transferred to the in-patient list, and included in the No. 465 ..... 48.
4. In addition to the above, there were prescribed for of out-patients attending at the infirmary every morning, and of whom no particular account is kept, on an average during the six weeks, 81.
5. Also by the Infirmary house surgeons, three times weekly in the workhouse wards, exclusive likewise of the preceding, and on an average during the six weeks..... 111.

Total influenza.—Of No. 1, or admissions into the Infirmary, more than half were influenza cases, simple or complicated, generally the latter; in all about..... ..... 250.

Of No. 2, or out-patients visited by the assistant house-surgeons at their own homes, about 450 were cases of influenza, mostly uncomplicated and slight ..... 450.

Of Nos. 4 and 5, a large proportion must have been influenza cases, from the verbal statements of the house-surgeons, and the large number of bad and mostly complicated influenza cases received from the workhouse, but the exact number I have no means of estimating. I should suppose from a comparison of the numbers with the numbers recorded under the same heads for December and January, 1836, (which latter they much exceed) and for other reasons, fully one-half were instances of the epidemic. So that there must have been a grand total in the six weeks of something not far short of 1000 cases of influenza treated in the various departments of the practice of the Infirmary.

Progress of the epidemic.—The first cases of influenza admitted into the Infirmary, and noted in the official journal, occurred January 2d.

Cases admitted in week ending 6th January	16
Ditto, ditto, 13th	64
Ditto, ditto, 20th	66
Ditto, ditto, 27th	46
Ditto, ditto, 3d February	32
Ditto, ditto, 10th, about	20
	244

By a statement with which I have been favoured by my friend, Dr. Boyd, of the St. Marylebone Infirmary, it appears that between Monday, January 9, and Saturday, February 4, 414 cases of influenza were admitted on the out-patient home-list, viz.—

Week ending 14th January	161
Ditto, 21st	139
Ditto, 28th	84
Ditto, 4th February	34

And the workhouse practice and morning out-patients' room practice advanced numerically, and receded apparently along with the Infirmary and home practices. So that the epidemic would appear to have begun with January, and declined in about the usual period of 5 to 6 weeks.

Symptoms.—Of course, amongst such a number, various combinations of symptoms must have happened. Confining my remarks to those that were admitted into the Infirmary, of whom only I had personal cognizance, I should say that the cases varied principally according as they were simple or complicated,—the former being tolerably uniform in their symptoms, the latter various as the complicating diseases. Of the former the symptoms are familiar, and require no detailed description from me, viz. at first chilliness, lassitude, and depression or anxiety, followed in some hours by more or less of heat, gravedo, headache, coryza, pain of back and limbs, soreness, sometimes extreme, of the chest and throat, with cough, smart fever, often coated tongue, nausea, and vomiting; sometimes gastro-enteritic irritation, with diarrhœa; occasionally transient delirium; generally wandering pains of trunk, especially about the sides. Such were the principal symptoms of the uncomplicated cases for twenty-four, thirty-six, or forty-eight hours after admission; after which expectoration became easier, the skin softer and moister, and cough and headache less troublesome, when the fever gave way, so that in

three or four days nothing but weakness, with a tiresome cough, remained in the majority of instances,—a weakness, however, greatly disproportionate to the duration or danger of the disease. Two-fifths of the cases noted as influenza by the house-surgeon were of the kind just glanced at; the remaining three-fifths were complicated as follows; viz. with

Pleuropneumonia	36
Bronchitis, mostly chronic, and combined with Emphysema Pulm. and Morb. Cord.	52
Phthisis	25
Pleuritis	5
Fever, in several instances Typhoid	25
Rheumatism, Chron.	2
Morb. Chron. Ventriculi	3
Croup	3
Ptyalism	1
Encephalitis	1
Morb. Chron. Cord.	3
Pericarditis	1

Of course the symptoms must have varied much in the second class, or complicated cases. In numerous instances the complicating diseases were at first so masked by the influenza, as not to be easily recognizable. Without the aid of the pleximeter or finger and ear-tube; indeed, it appeared to me nearly impossible in several cases to arrive at a safe or satisfactory diagnosis, more especially in persons advanced in life. The irregularity observed in the course of the functional signs did not in any material degree of course extend to the physical signs; so that pneumonia, phthisis, disease of the heart, and hypertrophy of the ramifications of the bronchus (or emphysema pulm. c. catarrh. chron.), which were the most frequent and formidable complications, were generally as easily identified as usual. In every case the influenza, if distinguished at all, was readily detected, whatever its complications, if attended to within the first day or two; after that period it often, in bad cases, became absorbed in the effects of the graver complicating disease.

Mortality.—The mortality with us, as elsewhere, amongst populations embracing indifferently individuals of all ages, sound and unsound, was very considerable during the period so often specified above. I do not know that any simple case was lost from influenza unaided by previous disease or subsequent complication; but so large a portion of the subjects of our influenza had had previously tuberculated lungs, diseased bronchial ramifications or hypertrophy of the heart, and the instances in which pleuropneumonia was excited were so numerous, that

We lost in the six weeks, from 31st December, altogether	118
Cases, to which must be added, deaths in the infirm wards of the Workhouse, same period	21
In the out-door practice also there were some deaths (exclusive of the mortality of the cases transferred to the Infirmary), amounting in the same period to	40
Giving a grand total mortality of	179

Table of Ages of all Cases treated in the Wards of the St. Marylebone Infirmary, from 30th Dec. 1836, to 10th Feb. 1837.

Ages of all Cases.	Living.		Dying.		Ages of the Influenza Cases, simple or complicated.	Influenza Cases: both Sexes.
	Male.	Female.	Male.	Female.		
Under 12 months	5	4	1	2		5
1 to 5 years	15	5	—	—		3
5 — 10	17	24	—	1		15
10 — 20	40	33	5	2		35
20 — 30	21	40	5	4		28
30 — 40	34	26	12	6		33
40 — 50	27	27	13	8		26
50 — 60	36	25	15	10		41
60 — 70	22	30	10	14		35
70 and upwards	21	11	9	2		26

Remarks on the Table of Ages.

From the preceding table it would appear that aged persons have enjoyed no such immunities during the late epidemic as they have been found, or, for want of counting, perhaps, supposed to do in former epidemics *. More than half of the cases were above 40, while a fourth part nearly were above 60. But the table represents the case too favourably for the other extreme of life, owing to the nursery and school children having usually not been so severely affected as to require hospital treatment. Another generally received opinion, however, is confirmed by our experience, viz. the potency of pectoral disease as a predisposing cause; this appears strikingly from the table of complications. For though the complicated cases were received into the Infirmary in much larger proportion, of course, than the simple cases, yet the number of the former is too considerable to be overlooked, or attributed to universality of diffusion of the epidemic causes, rather than to peculiar susceptibility in the subjects.

I have added the deaths of all diseases, but none for influenza separately, for the obvious reason that influenza proper produced no deaths.

Amongst the causes I have seen no reason to reckon contagion; perhaps I have not looked sufficiently, or inquired for it. Like all other epidemic diseases, the present, whether contagious or not, certainly commenced at first without contagion, and has probably, as I think, been exclusively reproduced and continued by recurrences of one or more of its first causes: what those first and essential causes are, I think with Pringle (Med. Obs. and Inq. vol. vi.) is still a problem for solution.

Morbid Appearances.

During the epidemic numerous opportunities presented themselves of investigating its anatomical characters; and in every instance I found that the fatal result might be attributed to previous disease, or to organic deterioration from lapse of years. The youngest was a female, 8 years old, who sank under double pneumonia supervening on tuberculation. There were a male and a female between 20 and 30; a male and a female between 30 and 40; a male and two females between 40 and 50; between 50 and 60 there were five males and two females; and between 60 and 70, six males and one female.

The complicating diseases were—

Chronic disease, with enlargement of the heart and bronchial ramifications, without acute pulmonic disease	9
Chronic disease of the heart and bronchia, with recent pleuro-pneumonia	6
Chronic disease of the heart, with phthisis (1), or recent pericarditis (1)	2
Pneumonia and pericarditis	1
Phthisis with pneumonia	1
Pneumonia	1
Pneumonia with suppuration of kidneys	1
Pneumonia, morb. cord., and arachnitis	1

I observed nothing constant in the post-mortem appearances but extreme injection of the trachea and all its branches, and in several cases thickening of the mucous lining of the passages. But those are nothing more than are, according to my observation, to be met with in a greater or less degree in almost every case of asthma, chronic catarrh, and old disease of the heart. It may be thought singular that disease of the heart should have occurred so often, much oftener than phthisis, being eighteen times out of twenty-two; and I should probably, some twelvemonths or more since, have been struck myself by such a statement. But it is undoubtedly true, that disease of the heart frequently escapes the observer who trusts to his eye as a means of admeasurement. When, as often happens, there is no pericarditis, nor any valvular disease, and when hypertrophy, if existing, is distributed pretty equally over the organ, there is a great chance of its escaping notice, unless very considerable; more especially if the inspector have defective information respecting the health of the deceased. To guard against error from that quarter, I have for some time weighed every subject inspected on account of disease of the heart, entire in the first instance, and then after a careful examination of the pectoral viscera, weighed the heart separately, after washing, and in this way have satisfied myself that amongst the labouring classes at least, hypertrophy of that organ is a still more common and fatal

* Hancock; Cycl. Prac. Med., *art.* Influenza, p. 5.

disorder than many or most physicians believe.

Treatment.—Regarding the simple influenza cases I have little to say. With warmth, water gruel for food, and repose in bed for a couple of days, they were usually convalescent, or about to be so, whatever might be the medication employed, provided only that medication were not energetic. "Res fuit herclé diætæ potius accuratæ ac debiti regiminis plerumque, quam medicinæ elaboratæ," (Huxham de ære, &c.) like its predecessor of 1743: occasionally, however, like the epidemic just referred to, "multo plus curæ atque diligentiæ poposcit." In a great majority of cases, nearly all indeed, it was thought advisable to blister the chest, which usually gave to the bronchial irritation the relief desired. In some also leeching or cupping was cautiously employed; where the pain under the sternum was urgent, or pneumonia or pleurisy was apprehended, or where gastro-enteritic irritation was well marked. The ordinary internal medicine was antimonial mixture (gr. $\frac{1}{8}$ to ℥iss.) with 2 or 3 drops of laudanum 4tis horis, which was generally found to answer well; but in several cases, probably 20, half a grain or a grain was prescribed with benefit. Purges were often called for by constipation at the commencement, and were at all times used without hesitation, according to circumstances. As soon as fever abated, animal food, beginning with broth, if not previously in use, was employed, with porter, wine, or other cordial according to circumstances. In 15 or 20 cases saburra and oppression were treated at first with emetic doses of antimony; and frequently the ordinary antimonial mixture operating on an irritable stomach, caused vomiting, which was found to be of service ultimately, however inconvenient in some cases at the moment. I do not know that bleeding was ever employed in uncomplicated influenza, but pneumonia or other visceral inflammations originating in influenza were encountered as usual. Into the treatment of the complicated cases it is unnecessary for me to enter, partly on account of the tediousness of a detail of so many various plans, but principally because influenza, not the diseases with which it was incidentally associated, is the subject of this communication. Suffice it in a general way to say that such cases were treated variously of necessity, but always with a double regard to the graver as well as to the transient and minor disease. Pneumonia and pleurisy were the complications that most frequently compelled us to deviate from our general method, and those were encountered by bleeding, both general and local, especially the latter, blistering, antimonials, and when less tractable on account of disease of the heart, age, &c. by mercury likewise, with or without opium.

John Clendinning, A.M. & M.D.
Physician to the Mary-le-bone Infirmary, &c.
Wimpole Street, Feb. 13, 1837.

NOTE ON THE INFLUENZA.

To the Editor of the Medical Gazette.

Sir,

If the papers which have appeared in the medical journals are to be received as indicative of professional opinion, considerable difference exists both in the theoretical and practical views taken by different men regarding the nature of the epidemic recently so prevalent.

I am induced to trouble you with this communication, not from having any thing new in the way of hypothesis to present to your readers, but simply from the desire to place on record a few facts, on which I leave it for others to theorize if they think proper.

I presume that the cases I have seen, taken altogether, have been of more than the average degree of severity, first, because they have been treated partly in St. George's Hospital, where the slighter cases were not admitted; and secondly, because a certain proportion of the others have been patients, to whom I have been called by general practitioners, who have done me the favour to ask for my assistance. Now, setting aside the mere catarrhal affections of a few days' duration, the great mass of the others which I have seen has been made up of unequivocal examples of inflammation of the air tubes. This has principally been developed in the minuter branches, but not unfrequently has extended into the trachea, and sometimes even to the larynx. The inflammation, however, has not been limited to the parts just mentioned, but in a certain number of cases has affected other mucous mem-

branes in addition to the simultaneous participation of the air passages. Thus, taking 40 of the more severe cases, I find that 3 had well-marked symptoms of laryngitis; 3 had pleurisy; 4 had otitis, which in three terminated in purulent discharge of several days' duration; 1 had inflammation of the conjunctiva in both eyes; 4 have had inflammation of the posterior fauces; 2 have had swelling and inflammation of the parotid and submaxillary glands on the subsidence of the pulmonary affection; and in 3 erysipelas has followed on the subsidence of the primary attack. As in all the above there was a pulmonary affection, the result is, that 25 had bronchitis of different degrees of severity, and 15, in addition to this, had simultaneous inflammation of some other and for the most part analogous texture; while 5 had other forms of inflammation as sequelæ of the original attack. Of the entire number here referred to, 5 have died, 3 of whom, however, I saw only at a very advanced period of the disease, and therefore cannot speak of its early stage; 1 was a case in which erysipelas supervened upon laryngitis, and scarcely, I think, to be called a fatal case of "influenza;" the other 4 were cases of bronchitis, attacking persons who had been previously subject to pulmonary affections, and in whom the disease ended in suffocating effusion into the air tubes.

The general symptoms were, at the onset, chilliness (in one amounting to violent rigor), severe headache, great lassitude and depression, cough, with hurried respiration and feeling of distress, referred to the chest generally, with much pain, (as if the parts had been bruised,) extending along the diaphragmatic margin of the ribs, aggravated by coughing or deep inspiration. The cough was at first dry, but after a few days became loose, in favourable cases, and afterwards accompanied by free mucous expectoration. The crepito-mucous râle was for the most part pretty general in both lungs, and a graver ronchus in the larger tubes; while, in not a few cases, a kind of tremor or vibration was felt, by merely laying the hand flat upon the chest, over the situations of the larger bronchi. The pulse was in general considerably increased in frequency, but (unless in the cases in which pleurisy was combined) was soft and compressible. There was heat of skin, but this diminished as the disease advanced, even in those cases which were running an unfavourable course.

In some of the published opinions of this epidemic, it has been argued that it was not essentially of inflammatory nature, because the patients did not bear bleeding well; but this I apprehend to be very frequently the case in bronchitis, as it also is occasionally in other inflammations—such as various forms of erysipelas. The disease in the present instance, as in bronchitis generally, has been by far most severe on those advanced in life, and it is familiar to all, that in them inflammation of the passages very rarely assumes the plastic form which it presents in early life. The principal source of danger, if I may so express myself, consists not so much in the activity of the inflammation as in one of its effects—namely, the increased secretion into the minute bronchi, by which the air is prevented from coming into contact with the pulmonary vesicles, so that the arterialization of the blood is arrested. Many of the patients whom I have seen, had more or less of a leaden tint, and all the four who died were deeply tinged—one of them as blue as I ever saw in cholera.

Of the four fatal cases alluded to, I had only an opportunity of examining two. The disease in one had lasted ten days, in the other a fortnight; in both the appearances were the same—namely, dark vascular redness of the mucous membranes, extending from the larynx to the minutest ramifications of the bronchi which could be traced. The smaller air tubes seemed to be literally soaked with fluid, while the larger were smeared over with viscid mucus, as adhesive as bird-lime. The lungs gorged with blood. In one, old adhesions of the pleuræ; but in neither any evidence of recent pleuritic inflammation.

The general treatment consisted in confining the patient to bed, exhibiting a draught containing ʒij. of liq. acet. ammoniæ, every four or six hours, acting gently on the bowels, and promoting expectoration by means of oxymel of squill and ipecacuanha. In the great majority of cases perspiration came on within the first two days, after which the symptoms gradually, though but slowly, abated.

If the disease assumed a more inflammatory character, that is, if there was more than the average degree of fever,

with hard dry cough, calomel, with James's powder, or tartarized antimony, was prescribed, which, in the more acute cases, was pushed to the extent of twelve grains of calomel, and two of tartar emetic, in twenty-four hours. In such cases blisters were also applied to the chest. If, on the other hand, the inflammatory symptoms were less marked, or had been subdued, the expectorants were strengthened by the addition of spirit. ætheris nitrici, and compound tincture of camphor. Where the debility was great, a draught, containing f. ℥ij. spirit. ætheris sulphurici, with ♏vj. of dilute sulphuric acid, sweetened with some syrup, was of service, and was afterwards followed up by some bitter tonic, particularly cinchona, as soon as the pulmonary symptoms were subdued.

Where there was much oppression of the lungs early, and before effusion had taken place into the air-passages, leeches to the sternum, followed by blistering, were efficacious. When the larynx and trachea were implicated, too, leeches were applied; but, guided by former experience, I abstained from general blood-letting in all the cases, except those in which the pleura was implicated; but even here the venesection was not well borne, producing a greater degree of subsequent debility than we are accustomed to witness from similar depletions; and in one of those, where the patient required to be bled three times to twelve ounces, although the pleuritic symptoms were thus overcome, he was seized two days after with erysipelas of the scrotum, and thighs adjacent, which speedily produced partial sloughing, and required the exhibition of bark and wine.

So, too, with regard to the affection of the throat; this has rather shewn a flabby and relaxed condition of the membrane than acute inflammation. It has usually been attended with great pain in the deglutition of the saliva, while a mouthful of food could be swallowed without the same difficulty. Most relief was afforded in such cases by stimulating and astringent gargles.

In the cases where otitis took place, although the bronchial inflammation had not subsided when the former came on, yet it was no more complained of, and had disappeared when the discharge from the ear was established. Nearly the same thing was observed with respect to the inflammation of the glands about the jaw—that is, by the time they were considerably swollen, the breathing was entirely relieved.

I am, sir,
Your obedient servant,
Roderick Macleod, M.D.

23, Henrietta-Street, Cavendish-Square,
Feb. 14, 1836.

REMARKS ON THE INFLUENZA OF 1837.

To the Editor of the Medical Gazette.

Sir,

If you think the annexed remarks on influenza of sufficient interest, perhaps you will give them a place in the Medical Gazette.—I am, sir,

Your obedient servant,
R. J. P.

Kensington, Feb. 15, 1837.

The cases of the epidemic may be divided into three classes, according to the aspect of the symptoms.

1. Those cases, chiefly occurring in young persons, having the features simply of mild catarrh.

2. Those assuming more the aspect of rheumatic fever, to which catarrhal symptoms are attached only in a trifling degree, occurring also chiefly in the young and middle aged.

3. That severe form, prevailing most amongst the old, and more especially those who have the chronic bronchial affection so common to elderly persons.

In the first form there is generally chilliness or rigors, succeeded by heat; pain, often severe, in the frontal sinuses and nostrils, with feeling of suffocation from swelling of the membrane lining the back part of nostrils—often with bleeding from that part. Troublesome cough, from irritation referred to the lower part of trachea; especially teazing during the night; not relieved in the usual way by expectoration. The pulse weak, not much quickened; tongue slightly furred, and generally moist.

Treatment.—By confinement to bed, or to a room of equal temperature, these cases soon pass over. Recovery seems to be chiefly retarded by the depression

so marked in this disease, together with the persisting *dry* cough.

Saline and mucilaginous medicines, as mucil. tragac., or acaciæ, mist. amygd., or oxymel, with small doses of antimony and nitrate of potass. The night cough much relieved by ten grains of pulv. ipecac. comp. at bed-time, in mucilage, with spt. æth. nitr. 3ss., or made into pills with mucilage; by which a quiet night's rest is procured with great relief. The bronchial irritation may be much mitigated by mustard poultices applied (from half an hour to two hours) to the upper part of chest. Secretion may be promoted by the following pill every four or six hours:—

Ext. Conii. Pil. Scillæ C. aa. gr. ii.;
Pulv. Ipecac. gr. i.

Diet, arrow-root, gruel, whey, beef tea; with meat early in the convalescence.

In the second form the early symptoms are the same as in the first, but more severe: there is headache, much pain in the aponeuroses of loins, scapulæ, and limbs, often round the *margin* of chest, apparently in the tendinous structures external to the chest, sometimes extending over one side and suddenly shifting to the other; the pulse quick, and generally small and weak; the tongue furred, white and moist, often dry and yellow; trifling cough, and uneasiness in the air passages; the cerebral symptoms in some cases severe, often amounting to delirium. There is generally much depression; often syncope. The urine is small in quantity, and loaded with lithate of ammonia.

Treatment. — Saline aperients, with calomel and antimony at night. Leeches to the forehead in many cases, and to the chest, followed by blisters, when the pains about the chest are severe. Bleeding does not seem more effectual in giving relief than leeches, and is not well borne. Vinum colchici, in half-drachm doses, relieves the pains in the head and limbs; 10 grs. of Dover's powder, with nitre, at bed-time, is very useful in allaying pain and procuring rest. Where the tongue is much furred, great relief is obtained by purging the liver with calomel, followed by warm aperients, as rhubarb, magnesia, and dec. aloes, or rhubarb and tartrate of potass, or sulph. and carb. magnesiæ, with tr. card. co. As soon as the febrile symptoms have subsided, and the tongue gets clean, quinine is the best tonic. The diet should be as nourishing as the stomach and system will bear.

In both these forms the depression of strength and spirits is very remarkable—quite out of proportion to the other symptoms.

In the third form the chief danger is from the large quantity of tenacious mucus secreted by the bronchial surface; the depression of strength causing great difficulty in its expectoration. The attack frequently appears but as an aggravation of symptoms previously existing, but whose features it rapidly changes. The strength sinks; the appetite fails; the circulation becomes languid; the strength is inadequate to expel the large quantity of bronchial secretion; the lips get blue, the intestines cold, and the patient soon sinks,—often in a few hours. In less severe cases, there is a lighter shade of these symptoms; the tongue is much furred—often brown and dry.

Treatment.—Much benefit is derived from blistering the chest, which should be done early in the case, so as to *anticipate* the severe symptoms. Squills, ipecacuanha, antimony in small doses (avoiding its depressing effects); and where antimony cannot be borne, the lobelia inflata (tincture) appear serviceable in clearing the bronchial tubes, in doses of 3ss. every six hours, with æther and ipecac. Where the tongue is much furred (as it is almost always), one or two doses of calomel, followed by hyd. c. creta, combined with rhubarb, or at night with Dover's powder. This form of opium appears to agree better than any other in this disease; perspiration is promoted and rest is procured, without that binding effect on the secretion which follows the other preparations of opium. Nourishment must be cautiously given from the first; such as beef-tea, jelly, yelk of egg, with warm milk, or whey; and where there is much prostration, with wine, or brandy. There is in many cases very troublesome vomiting; this is relieved by potass, soda, or ammoniæ carb.; effervescing with lemon juice. Warm milk, with soda-water added to it, is a pleasant beverage in these cases.

Amongst the young, one fatal case only occurred, in a publican of intemperate habits, and unhealthy condition.

T. C., aged 30.—He suffered a few

days from the simple catarrh, and neglected it. Rather suddenly the symptoms took a formidable aspect. Hoarseness, hurried short respiration, frequent cough, with trifling expectoration of mucus; quick and *very weak* pulse; the voice soon diminished to a whisper; the stifled cough became almost constant; the skin clammy; lips blue; hands and feet cold; and nails blue. The chest throughout was dull to percussion, and the respiration scarcely audible.

The extreme prostration forbade depletion in any form; calomel offered the only chance, and it was given freely; 3 grains every 2 hours, with carbonate of ammonia every 4 hours. Warm wine whey was the only thing he would take.

A blister applied to the chest became gangrenous soon after vesication. He died 48 hours after the commencement of severe symptoms.

Post-mortem. — The lungs did not collapse when the chest was opened; they still crepitated on pressure; were thickly spotted over with petechiæ under the pleura.

The lungs, trachea, and larynx, were removed for examination. The membrane lining the *larynx* was of a deep red colour, with flakes of lymph in the ventricles, and on the chordeæ vocales. Trachea intensely injected throughout, and coated with glairy adhesive mucus, as also the large bronchia; a red mucous fluid poured out of the trachea on inverting the lungs. The lungs congested and gorged with serous and mucous fluids, which oozed out abundantly on incising them. In some parts, especially in the lower lobes, consolidation of the structures had ensued, being the first stage of peripneumonia. Heart sound. Liver filled with yellow tubercles, and very hard.

NEW (?) METHOD OF TREATING HYDROCELE.

IN REPLY TO MR. TRAVERS.

To the Editor of the Medical Gazette.

Sir,

In the Lancet of the 7th of May last I pointed out to the medical profession a new method of treating hydrocele—namely, by puncturing with a very fine needle, until a drop of fluid oozes out on withdrawing the needle, and in three days the hydrocele will completely disappear, no matter in what quantity the fluid might have been collected. In the last number of the Medical Gazette there is a letter from Mr. Travers, in which he seems to insinuate that he was the discoverer of that method, because he had punctured a hydrocele with an acupuncturation needle a fortnight prior to the date of my letter. Such may have been the case I am not in a position to deny, although I must in justice to myself declare that I never heard of Mr. Travers deviating from the ancient routine of practice in the treatment of hydrocele or any other disease. But lest the public should imagine, like Mr. Travers, that my discovery and the appearance of the letter in the Lancet to be synchronous, I can bring forward evidence at any time that the operation had been performed two years before Mr. Travers conceived it, as he terms it. I even spoke of it in public to several medical gentlemen, who will, I have no doubt, vouch for the accuracy of the statement. It was not until I perfected the operation, and had seen many cases, that I dared to make public the extraordinary fact that a single puncture with the point of a fine needle into an encysted cavity is sufficient to cause the absorption of the fluid contained therein. The practice of making many punctures is not only useless and dangerous, but actually less likely to succeed than a single puncture; of this the profession in general (I mean general practitioners as well as hospital surgeons) will be convinced by experience. If Mr. Travers had read my letter attentively, he would have seen that I first introduced the method as a palliative cure; although I have seen cases where a radical cure was effected by the simple operation of puncturation.

As the method of puncturation for the radical cure of hydrocele differs in some respects from the palliative, as soon as I have satisfied my mind on the subject, I shall rejoice, though an humble individual, to contribute my mite towards the advancement of science.—I am, sir,

Your obedient servant,

D. Lewis.

28, Artillery-place, West,
Bunhill-row, Feb. 14th, 1837.

TREATMENT OF HYDROCELE.

NOTE FROM MR. KEATE.

To the Editor of the Medical Gazette.

Sir,

On looking over the contents of your last number (for 11th inst.), I saw "Account of a new method of operating for Hydrocele, by Benjamin Travers, Esq., Surgeon to St. Thomas's Hospital." My hopes of gaining information naturally led me to refer to his letter at page 737 of the Gazette, where I read the account, I must confess, with some disappointment, and was rather surprised to find that there was another claimant for the merit of discovering this supposed new method.

While I do not mean to intimate any doubt of the same ideas having occurred to each of these gentlemen without any knowledge of the other's theory or practice, or of any previous operation of the kind, I trust it will not be offensive to either of them if I assure you that the plan and the practice have been known and acted on for very many years by myself, and I dare say by others. By one other person I know it was performed I dare say twenty years ago, namely, by a friend of mine, who for some years practised as a physician in this town, and is now living in retirement in the country. This gentleman performed the operation on *himself*, as he was nervous about the injection, and fancied, as he said, that if he could convert ascites into anasarca, absorption from the cellular structure might cure the malady; and in his own case it was perfectly successful.

At his suggestion I tried it frequently, both at the hospital and in private practice; sometimes successfully, but more frequently the collection of fluid in the sac returned, and I generally found the patients impatient of the numerous punctures, and of the time required for the absorption. I remember talking to Sir Astley Cooper on the subject, and, as far as my recollection serves me, the plan appeared not to be new to him.

I cannot venture to mention the name of the physician in this letter, as I have no time to write and ask his consent before the appearance of your next number; but I can have no hesitation in stating it to you in confidence, or to any gentleman who may think it worth while to ask me.

I am, sir,
Your obedient servant,
Robert Keate.

Albemarle-Street,
Feb. 15, 1837.

[The name of the physician above alluded to is mentioned in a postscript, but as it is marked "confidential," we of course abstain from publishing it.—Ed. Gaz.]

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Pharmacopœia Collegii Regalis Medicorum Londinensis. 1836. Printed by order of the College.

We resume this week our remarks on the new edition of the London Pharmacopœia; and in the first place propose offering some further observations on the Materia Medica.

In various places the College quotes De Candolle as its authority, though most arbitrarily, and sometimes incorrectly. Thus his name is attached to Aconitum paniculatum, when, in fact, Lamarck should have been quoted; also after the different species of Citrus, we have "De Candolle" instead of "Risso;" and even the old Linnean name, Amygdalus communis, has "De Candolle" attached to it. If the College intended merely to indicate that De Candolle has adopted these names in his Prodromus, why omit quoting him after Boswellia serrata, Papaver somniferum, Astragalus verus, and many others? But in some cases the name of this celebrated botanist has been attached to species which he has never mentioned. Thus the Oleum Bergamii is said to be procured from *Citrus Limetta Bergamium*, on the authority of De Candolle, although there is no species of this name in his Prodromus!

We are at a loss to conceive why the College has thought proper in some instances to follow De Candolle, in others to retain the old names, in

defiance of him and of other modern authorities: thus Myrtus Pimenta is still retained, though De Candolle, whom they profess to follow, calls it Eugenia Pimenta. In the Pharmacopœia we are told balsam of Peru, and the balsam of Tolu, are obtained from the same species, namely, Myroxylon peruiferum: yet De Candolle, their professed authority, distinctly says that the first of these balsams is from M. peruiferum, but the second from M. toluiferum. In some instances wrong plants have been quoted: Lavendula spica for Lavendula vera; and Fœniculum vulgare for Fœniculum dulce. The latter is a gross error, since De Candolle himself was the first to separate the F. dulce from the F. vulgare, for previously they had been regarded as varieties merely; so that it would seem the name must have been quoted in the Pharmacopœia without the Prodromus having been consulted.

There are many other errors of a less important kind, but strongly indicative of a slovenly, loose, and careless mode of getting up. Thus *Radix* is put for *Rhizoma*, under Aspidium; Amyris elemifera is printed Amyris Elemifera; Castor fiber is written for Castor Fiber; Strychnos nux vomica is put instead of Strychnos Nux vomica; and Terebinthina Canadensis for Terebinthina canadensis. These mistakes, though slight, ought not to have been allowed to have occurred.

In the first column of the Materia Medica the names of the different substances are sometimes put in the singular, sometimes in the plural number, shewing a great want of uniformity in the plan of proceeding. Thus we have Myristica, a nutmeg, but Mora, mulberries; while the syrup of the latter is called Syrupus Mori, syrup of a mulberry!

Chemical nomenclature.—It has been cast as a reproach on former editions of the Pharmacopœia, that the nomenclature employed was not in accordance with the then state of chemical knowledge; and in this edition an attempt has been made to remedy the defect. Thus in most instances the word *chloridum* has been substituted for *murias;* though in a few cases the term *hydrochloras* has been properly preferred, as in sal ammoniac and the hydrochlorate of morphia. The quondam alkaline carbonates are now either *sesqui* or *bicarbonates*, which is all very proper. But we may here remark, that the College has fallen into an error in denominating the common magnesia of the shops a carbonate "Magnesia alba," says Berzelius, "is a chemical compound of carbonate and hydrate of magnesia. When we precipitate the solution of a magnesian salt by an alkaline carbonate, we ought to obtain a neutral carbonate; but the water decomposes it, so that the alkaline carbonate incompletely precipitates the earth, some bicarbonate of magnesia remaining in solution."

The nomenclature of the double salts has been altered: thus tartar emetic is now called *antimonii potassio-tartras;* the quondam, cuprum ammoniatum is now *cupri ammonio-sulphas;* ferrum ammoniatum is altered to *ferri ammonio-chloridum;* soda tartarizata is termed *sodæ potassio-tartras;* and so on. In naming these substances, the College has followed the last edition of Dr. T. Thomson's "*System of Inorganic Chemistry.*" But, with all due deference to the College, and to Dr. Thomson, the names are very objectionable. Let us illustrate our meaning, by reference to the preparation called in the Pharmacopœia the "Ferri Potassio-Tartras." This salt is a double tartrate; — that is, its basic or electro-positive constituent is the tartrate of potash, while its acid, or electro-negative ingredient, is the tartrate of iron. That the iron really does perform here the function of an acid, seems proved by the fact that it is not recognizable in a solution of this double salt, by either the ferrocyanuret of potassium (unless, indeed, an acid be added, to disengage the tartrate of iron), or by alkalies. Now the constitution of the salt being admitted, what ought to be its name? In the denomination of the single salts, we always put the name of the acid, or electro-negative ingredient, before that of the basic or electro-positive one: thus we say, sulphate of magnesia, not magnesiate of sulphuric acid. If the same principle be extended to the double salts, we ought to designate the above mentioned chalybeate salt, the *iron-tartrate* of *tartrate* of *potash*, which may be conveniently shortened to the *iron-tartrate of potash*, while tartar emetic

would be the *antimony-tartrate of potash*. Berzelius's nomenclature is not well adapted for our language, but it is formed precisely on the principles we are here advocating. Thus he calls soluble tartar, the "*tartrate potassique;*" the ferri potassio-tartras of the Pharmacopœia is "*tartrate ferrosi-potassique;*" and emetic tartar is "*tartrate antimonico-potassique.*"

By the way, we may remark that the College has not adhered to Thomson's method of nomenclature in the case of all the double salts. Thus they describe alum as being "*sulphas aluminæ et potassæ,*" whereas Thomson calls it "*potash-sulphate of alumina.*" According to our notions it ought to be "*alumina-sulphate of potash,*" a name which in spirit agrees with that of Berzelius, "*sulfate aluminico-potassique.*"

Prussian blue is most improperly, as we conceive, termed "*Ferri Percyanidum.*" In Mr. Phillips's translation, the following sentence occurs:—"Percyanide of iron, usually called Prussian blue, and sometimes Ferrosesquicyanide of iron," &c. Now any person would fancy from reading this passage, that while the vulgar name for this substance is Prussian blue, the usual and proper term is percyanide of iron, and that the phrase ferrosesquicyanide is sometimes but less properly employed. How stand the facts?

1st. Prussian blue is called in no chemical work of repute that we have consulted, percyanide of iron. On this point we have referred to the works of Thomson, Turner, Henry, Ure, Brande, Fyfe, Berzelius, Thenard, Dumas, Gay-Lussac, Lassaigne, and Gmelin. In not one of these have we met with the collegiate name of Prussian blue, even among the synonymes for this substance.

2dly. The term percyanide is incorrectly applied to it, on two grounds: the first is, that there is another compound to which this name more properly belongs; and secondly, Prussian blue is a double cyanuret. If we turn to the "*Table Synoptique*" of Berzelius, published in 1835, we find a substance is there mentioned by the name of *Cyanure ferrique* (equivalent to our term percyanide of iron), containing 59·33 per cent. of cyanogen; while Prussian blue contains only (according to Mr. Phillips) 54·4 per cent. It is true this *Cyonure ferrique* has not been obtained in the separate state, but of its existence in certain compounds, no chemist, we believe, entertains a doubt.

3dly. The term Ferrosesquicyanide (or Ferrosesquicyanuret) of iron, which we are modestly told "sometimes" occurs, is the name by which it is designated in every modern chemical work.

Præparata et composita.—For the same reasons that the College has not thought it necessary to give formulæ for the preparation of sulphuric acid, sulphate of magnesia, acetate and phosphate of soda, chlorate of potash, ferrocyanide of potassium, and many other chemicals, we think they might have left out various formulæ still retained in the Pharmacopœia. We allude now to those for making such articles as chloride of lime, hydrochloric acid, acetate of lead, tartaric acid, &c.; and others which are manufactured on a very large scale, their uses not being confined to the medical profession.

We are glad to see formulæ for the preparation of the vegetable alkalies introduced. We may remark that the production of aconitina is a delicate process, and requires a dexterous and experienced manipulator to succeed. The article sold as aconitina, made by Pelletier, is almost inert, and for remedial purposes useless.

The manufacture of the disulphate of quina without the use of spirit has long been a desideratum with chemists, which we are afraid the formula of the College will not remove. It is a modification of M. Henry's process, which did not succeed in France, and failed, as we know, in the hands of an experienced English manufacturer, in consequence of the small product obtained by it; for he found the old process in which spirit is employed to be cheaper.

The process given in the Pharmacopœia for the manufacture of the biniodide of mercury, is, in our opinion, inferior to the one usually followed—namely, the mixture of solutions of the bichloride of mercury and the iodide of potassium in atomic proportions. The product by the latter process has a much finer colour than that obtained by rubbing iodine and mercury together, as directed by the College.

The mode of procuring bromide and iodide of potassium, as given in the

Pharmacopœia, is objectionable, — a much purer article being obtained by other methods. By the College process, it is difficult to procure the iodide free from some carbonate. It is well known that a considerable portion of the iodide of potassium of commerce is largely adulterated with carbonate of potash,—frequently the latter ingredient constituting more than 70 per cent. of the so-called iodide. Now the presence of this carbonate may be instantly ascertained by pouring a little lime water over a suspected crystal placed in a wine-glass. We are surprised this test was not mentioned in the short notes introductory to the "Præparata." It is true the non-solubility of the carbonate in alcohol would show the presence of some impurity by the College test, but the test we have mentioned is more simple, and can be more expeditiously applied.

Manufacturers frequently make the sesqui-carbonate of soda, and the bi-carbonate of potash, not by the processes given by the College, but by boiling the sesquicarbonate of ammonia with the carbonate of soda or of potash. The process is given in the "*Pharmacopée Raisonnée*" of Henry and Guibourt, p. 409, tom. ii., and should have been noticed by the College.

There are two most absurd compounds introduced into this edition,—namely, a *compound mixture* of *cascarilla* (composed of infusion of cascarilla, vinegar of squills, and the compound tincture of camphor),—and the *compound mixture* of *gentian* (containing compound infusion of gentian, compound infusion of senna, and compound tincture of cardamoms). We presume these are the favourite prescriptions of some Fellow of the College, who wishes to save himself the trouble of writing their composition every time he orders them.

We could raise many objections to, and point out several errors in, the arrangement of the different preparations: our space, however, only permits us to notice the following:—Tinctura ferri ammonio-chloridi and tinctura ferri sesquichloridi ought to have been inserted along with the tinctura iodinii composita and other tincturæ: many articles have been omitted in the index; as the above-mentioned two tinctures of iron, &c.

In concluding these remarks on the Pharmacopœia, we may add, that while there are undoubtedly many very great improvements in it, as compared with the previous edition, as a whole it has disappointed us; and we must add, that the parties who undertook to prepare it for the press have not performed their duty in a creditable manner either to themselves or to the College.

The Works of John Hunter, F.R.S.; with Notes. Edited by James F. Palmer. In 4 vols. 8vo. illustrated by a volume of Plates, in 4to. Vol. I. Longman and Co.

In our last number we briefly noticed this work, and the coincidence of its appearance with the re-opening of the Hunterian museum, and the delivery of the Hunterian oration. In our present notice we propose adverting to some particulars of the "*Life;*" but shall first call attention to the nature of the work itself.

This is not merely a reprint of Mr. Hunter's published works and miscellaneous papers, but a complete collection of all his writings, printed as well as manuscript, systematically arranged, and preceded by a new life of the author. We are informed by the editor, that nearly a volume and a half of this collection appears now for the first time in print; and that he has been enabled, chiefly through the liberality of the Royal Society in allowing him the use of their plates, to complete the entire series of illustrations, amounting to not less than sixty-three engravings, among which are many of a very costly and magnificent description. Undoubtedly the peculiarity of the work consists in the plan of grafting on the text of the author a series of annotations illustrative of the various subjects treated of—a plan which cannot fail to be generally useful, and which, in our judgment, was the only thing required in order to render Hunter a popular author. Independently, however, of this, the work was much required, and we are glad to see it presented to the profession in so accessible a form.

One circumstance cannot fail to strike every one in the least acquainted with Hunter's life, which is, that he had not only extraordinary difficulties to contend with during his life, but that, after

his death, the same difficulties seem to have conspired against his fame. More tardy and incomplete justice was never rendered to any one possessing the same claims to distinction. Nearly fifty years have elapsed since his death, and yet, until lately, his museum has never been adequately displayed, or illustrated by catalogues, his writings have never been collected, his manuscripts have been destroyed, and his life has been incompetently written;—we say incompetently written; not but that Sir Everard Home possessed the ability, as well as materials, to have done justice to the subject, but that he did not choose so to employ them. The memoir which he has left us, prefixed to the Treatise on Inflammation, is meagre in the last degree, and totally destitute of those characteristic traits of character which give interest to biography. Mr. Jesse Foot's production is a gross libel, and Dr. Adams' a fulsome and undistinguishing panegyric.

It requires no mean qualifications to become the biographer of such a man as Hunter. Praise and blame are easily dispensed, but without sufficient grounds for these verdicts the former becomes mere compliment, and the latter absolute temerity. The celebrated artist, Barry, observed, "that no portrait painter could paint a better head than his own." The mere outline of the face may be given, by any artist of mediocrity, with tolerable precision; but the man of genius only can animate his canvas with the mental character and energy of his subject; the exterior indications of deep feeling and powerful intellect being only to be perceived, felt, and expressed, by a kindred genius. We do not mean by these observations to imply that Hunter and his biographer are at all comparable, but that there is something in the composition before us which leads us to judge very favourably of the author. His subject is well arranged, his anecdotes are aptly introduced, and his style is manly and perspicuous. It is evident that he has an adequate acquaintance with comparative anatomy, as well as with medical literature, to form a correct judgment of the various subjects which come before him. He is always impartial, and in doing justice to Hunter, does no injustice to others. His characters are justly conceived and boldly drawn, and particularly that of Hunter, which stands out with an individuality of form which marks the skill of the artist. In fact, the Life before us completely supplies what we wanted, and we cannot but consider it as a fortunate circumstance that it has been written while it was yet possible to rescue so many anecdotes from oblivion. A very few years more, and it would have been impossible to have written such a Life.

If it be the prominent characteristic of a superior mind to select a grand and useful object of pursuit, and to follow that object with indefatigable perseverance and well-directed toil through a long life, regardless of, or surmounting, innumerable impediments, harassed by petty enmities and jealousies, little aided by friends, interrupted by the duties of an arduous and anxious profession and by bodily diseases induced by the intensity of his exertions; little cheered by even the most candid of his scientific contemporaries, who could only dimly scan the scope of his views, and could not appreciate his ability to accomplish them; if such singleness of object and vigorous perseverance in its attainment mark the highest order of intellectual and moral energy (and the fame of Columbus is founded on these claims), no age or nation can produce a name that would be robbed of its dignity by a comparison with that of John Hunter. Taking him altogether in the combined character of a physiologist and surgeon, and contemplating him under these accumulated difficulties, we cannot but consider him as an *instantia singularis* among men, which would have marked a new era in science in any age or country in which he might have happened to have lived. That Hunter was indifferent to fame cannot be asserted, although it is probable that he was less ambitious of present renown, and especially of mere popularity, than most men of his calibre. His object, like that of his brother, Dr. William Hunter, appears to have been more remote, and to have been directed to posthumous celebrity. This probably arose from the habitual tendency of his mind to form grand conceptions, and to look forward to some remote but undefined period for their ultimate accomplishment, and partly also, it may be presumed, from a consciousness that he had outstripped the age in which he

lived, and which he therefore considered as incompetent to judge of his merits. This appears by his bequeathing his two great works (his Museum, and his work on Inflammation, the grand embodiment of his experience and labours) to posterity; trusting, in the manly confidence of his nature, that they would be justly appreciated after his death. He was not unaware of the impulse which his labours had already imparted to science, and hence he formed the conclusion that a time would soon arrive when his pretensions would be estimated as they deserved. Perhaps his eager pursuit after knowledge was of the same nature as that of some men after wealth, which leaves them no time to enjoy it. Certain it is, that he spared no pains in completing his Museum, and no labour in perfecting his work on Inflammation, although he left the one without a catalogue, and the other to be published after his death—a clear evidence of the noble kind of ambition by which he was animated.

It appears to us that Mr. Ottley has too slightly passed over that part of his subject which at first may strike us as of most importance—namely, to mark the limit to which physiological knowledge had reached at the first outset of Mr. Hunter's career, and then to trace the influence of his example and discoveries on the subsequent rapid advancement of that science; and also, that he has omitted to draw that large and ample sketch of Mr. Hunter's genius, and to institute those parallels between him and other great men, which the case seems to have required. We believe, indeed we are assured, that these defects arose from a desire to limit the memoir to a reasonable size, and not from any oversight on his part. It must be evident that such objects could not have been attained without considerable amplification, and also that much accurate research would have been necessary, in order to adjust the respective merits of physiological claimants, which could scarcely have been instituted in a provincial town. We are informed, however, that the first of these omissions will be compensated by a preliminary dissertation to the fourth volume of the present edition, from the pen of Mr. Owen, and than whom, no one in this country, or perhaps in any other, is more competent to the task; and with regard to the second, we propose ourselves, in a future notice of the work, to endeavour to supply the deficiency.

MEDICAL GAZETTE.

Saturday, February 18, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

COLLEGE OF SURGEONS.

HUNTERIAN ORATION.

THE re-opening of the College of Surgeons at the present moment is an event of some interest and importance to the profession generally. The building has been greatly enlarged, and in many respects better fitted for the accommodation of the great body of members. The library is a splendid room, which is to be open not only during the day, as formerly, but in the evening also three times a week. It contains 20,000 volumes, which are rendered easily accessible by the attendance of an excellent librarian, and is altogether a very important addition to the professional resources of the metropolis. But the principal improvement relates to the museum, to which a much more extended space is allotted; and many preparations which have long been buried in dust and cobwebs are once more permitted to "revisit the glimpses of the moon," or rather of the meridian sun, in which, thanks to the labours of Mr. Clift and Mr. Owen, they now shew to great advantage. The pathological portion of the collection is separated from the physiological, and the facilities of study are thus greatly increased. But still more important is the advance made in the Herculean labour of constructing a catalogue *raisonnée*, which, in conjunction with the lectures about to

be delivered by Mr. Owen, in illustration of the museum, will give a practical value to the possession of this magnificent collection far greater than any which has hitherto been derived from it.

Under any circumstances, then, the re-opening of the College, with such prospects, would have been an event of interest, but it has been rendered doubly so by the changes which have taken place during the interval of its temporary closure. It is evident that if the present government endure for but a few years, a struggle must take place between the present institutions and the rival one which is in embryo — the new University, in which the tripartite faculty of physic, surgery, and pharmacy, is to be attempted, not in conjunction with the present Colleges and the Worshipful Society, but in direct opposition to them; so that the old or the new must necessarily fall.

Of the existing institutions connected with the medical profession, the College of Surgeons is in various respects by far the most important. The building is worthy of a great national establishment; the library is a magnificent addition, which has grown up of late years; the museum is a monument worthy of the name it bears, and creditable to the nation. Nor do the names of many among its present members reflect less honour upon English surgery than the greatest of their predecessors; while of the existing Council it is but justice to add, that they have shewn their determination to keep pace with the march of intellect and the improvements of the times. In these respects—we mean in setting aside ancient prejudices — in gathering wisdom from passing events —and in rendering their institution available to great national objects— we must say they have far outstript their elder brethren in Pall Mall, and accordingly are their character and influence as a public body proportionally greater. It is in Lincoln's Inn Fields that the battle between the new and old race of practitioners must be fought; and if we may judge from the number of members, and from the nature of the feelings manifested on Tuesday last, he will be a bold man who leads the forlorn hope in storming their citadel.

But it was our intention merely to have given some account of the proceedings of Tuesday; and to these we now turn. Never, probably, since the oration sacred to the genius of Hunter was first instituted, has it excited more general interest; indeed, the crowd was so great, that many were unable to procure admission; but this was unavoidable, as the members of the College are now so numerous that it is quite impossible for all of them to be accommodated at once. We understand, however, that by placing additional benches, and other arrangements, what in the language of the theatres is called "sitting-room," had been provided for considerably more than 500 persons.

Among those present were the Duke of Wellington, Sir Robert Peel, Lord Stanley, the Bishop of London, the Lord Chief Justice Denman, the President and Censors of the College of Physicians, the Director-General of the Army Medical Department, the Physician-General of the Navy, and many other distinguished visitors. On the entrance of Sir Robert Peel, the whole company rose and cheered him in the most enthusiastic manner, and a like compliment was paid to the Duke of Wellington, on his entering the theatre immediately afterwards. The same animating scene was repeated on their leaving the room after the oration was concluded; and nothing could possibly ex-

ceed the warmth of the reception with which the presence of those distinguished statesmen was hailed.

On the orator of the day (Sir Benjamin Brodie) entering, he was greeted in a manner that must have been most gratifying to him—such, indeed, as the most callous man must have felt as a willing tribute of cordial and friendly feelings, on the part of the immense body of his professional brethren assembled on the occasion. Before commencing the oration, he stated that Sir Astley Cooper had been prevented, by sudden illness, from taking the chair as President; and the manner in which the compliment which he took the opportunity of paying to the character of his distinguished compeer, as "the greatest of English surgeons," was received, showed how true is the sentiment that *laudari a laudato viro* is the highest tribute which merit can receive.

The oration was very interesting. It began with an allusion to the two friends, William Cullen and William Hunter, leaving the obscure village which was the field of their early career, to become pre-eminent in the capitals of Scotland and of England. The progress of John Hunter, "the raw uncouth Scotch lad," from the idle habits of his boyhood till he became the most industrious student and greatest philosopher since the days of Newton, was next rapidly sketched, and interspersed with numerous anecdotes and illustrations. The labours of Hewson, Cruikshank, Baillie, and Home, were next successively spoken of. To Baillie the orator gave just and warm praise for his sagacity and skill, but above all for his surpassing disinterestedness, his entire *abandonnement de soi* in all his professional conduct. To Home, too, he hesitated not (despite the "shade" which certain transactions of his latter years have cast upon his memory) to give the meed of praise which was due to some parts of his professional character. Lastly, he spoke of Sir William Blizard, whose habits and disposition he pourtrayed as those of chivalrous simplicity, and a conscientious but mistaken love for all that belonged to a former age.

Sir Benjamin concluded by some appropriate remarks addressed to the younger portion of his audience; but neither of these, nor of any part of the address, do we give more than a mere notice, because we understand that it will be published—when we shall have an opportunity of bringing it before our readers in a correct form. The oration was frequently interrupted by applause, and the whole scene was one which could not fail to be very gratifying to the friends of the College; while it must have been gall and wormwood to those who for the last three or four weeks have been labouring to produce a very different result.

THE LATE M. DESGENETTES.

This distinguished veteran died at Paris, on the 4th instant, after a long and painful illness. A deputation from the Academy of Medicine attended his funeral, on which occasion several complimentary discourses were pronounced over his grave, according to the French fashion of doing honour to the dead. One of these eulogies was heard to proceed from the "*voix enchanteresse*" (as the Gazette des Hôpitaux has it) of M. Pariset, another from the "*noble et robuste organe*" of M. Broussais, and the third was marked "*par l'eloquence mâle*" of M. Bouillaud.

In M. Desgenettes the French have lost one of the most illustrious ornaments of their medicine and their military renown. His name has long been distinguished in the page of history: it was widely known, and was popular in Egypt, in Syria, in Spain, in Russia, as well as in France.

With a higher and better feeling than

Hippocrates, as some of his panegyrists have said, he bestowed his professional eare indiscriminately on the sick of all nations; on the Turk as well as the Christian—on the inhabitants of the north as well as of the south.

The tact with which he treated the moral as well as the physical evils incident to suffering human nature, was well exemplified by his memorable proceeding in Egypt. He there adopted a remedy for the plague, which aeted as if by enchantment. The soldiers had become panic-struck on the appearance of the pestilential malady among them—their mental depression was extreme. The mortality was tremendous, and raged precisely in proportion to the despair which seized the victims. What was to be done? How was confidence to be inspired? The thought struck Desgenettes that there was but one way of safety. He went among the troops, and assured them that those hideous buboes were not infectious; and in proof of this, in the presence of the French army, inoculated himself with the plague. It was a daring expedient: rash and desperate, without being decisive; but it was the salvation of the soldiers. Their eourage was restored, and the mortality immediately diminished.

The noble part which he played in Syria did him still greater honour. He refused to obey the inhuman mandate of Buonaparte, who sought by his means to rid himself of the siek at Jaffa. It was suggested that they should be despatched with opium. "My art teaches me to save men, not to destroy them," was the heroic answer of Desgenettes; nor does his boldness seem to have lost him the favour of his master. For five and twenty years he was confidentially engaged about the person of Napoleon: from the rise of the victor in Italy to his setting at Waterloo, Desgenettes was with him in all his eampaigns.

In the memorable retreat from Russia, Desgenettes was made prisoner; but he proudly demanded his liberty, "not as a boon, but as a right;" he appealed to the character of his profession, and in partieular to the care which he had bestowed indifferently on Russians as well as Frenchmen. An imperial ukase soon set him free. The Emperor Alexander made a special communication to him, and expressed the high esteem which he entertained for his character. The King of Sweden shortly after sent him the order of the Polar star.

A similar tribute, it will be recollected, was paid to the merit of Baron Larrey, at Waterloo. This eminent surgeon, and distinguished *confrère* of Desgenettes, was taken prisoner by the English in the retreat after the battle; but he soon obtained his liberty through the same honourable feeling: he had been indefatigable in exerting his professional services in behalf of both English and French.

Desgenettes was born at Alencon, in 1762, and educated chiefly at Paris. He visited this country about the year 1785, and enjoyed the friendship of Sir Samuel Romilly, Sir Joseph Banks, and all the eminent persons of the day. Mirabeau was in England at the same time, and it was here that Desgenettes made his acquaintance. After this he travelled a good deal in Italy, but returned in 1789, and graduated doctor in medicine at Montpellier. In 1793 he obtained an appointment in the Army of Italy; and during the subsequent campaigns of Egypt and Syria was raised to the rank of Physician-General (*Médecin en chef.*) The professorship of *Physique médicale et d'Hygiène*, in the Faculty of Paris, was bestowed on him in 1799. In the sweeping changes made in the professorships under the Frassinous administration, in 1822, Desgenettes, along with Chaussier, Dubois, Pinel, and Vauquelin, were ousted from their chairs; but Desgenettes was reinstated some years since, and retained the office till his death.

The character of his mind was that of sterling good sense and sagacity. His sturdy independence and liberality of sentiment were also generally appreciated. As a teacher, he was clear and systematic; and his lectures abounded with original and striking views. As a speaker, his manner was familiar, and to the point; in discussion, particularly in the Academy of Medicine, he has always displayed a ready command of reasoning power, combined with an animated elocution.

He wrote several things; such as the Analysis of the Absorbent and Lymphatic System, and his Medical History of the Army of the East; but his life was rather spent in action than in study, although the business of the camp did not prevent him from reading

much, and of gathering from books a solid erudition, which he always knew how to use with discrimination.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 14, 1837.

Mr. Earle, President, in the Chair.

There were three papers read this evening. The first was—

On the Constitutional Treatment of Exostosis with Mercury; conjointly written by F. C. Skey, Esq., Assistant-Surgeon to St. Bartholomew's Hospital, and Dr. Bostock, F.R.S.

The author (Mr. Skey) detailed the particulars of a case under his care in St. Bartholomew's Hospital, which had been treated by mercurial inunction. The disease occupied the upper part of one humerus, where it formed a considerable tumor, and likewise the region of each knee, bony growths being apparent from both femur and tibia. The subject was a young woman, in every other respect apparently healthy. The author stated that the tumor had progressed very apparently up to the period of his application of the above treatment, from which date the bony enlargements ceased to extend, and that by perseverance in the remedy there was some reason to hope that a positive diminution in the general mass of the diseased growth had occurred. This he inferred from the cessation of a degree of numbness in the hand of the affected limb, which had been occasioned by the pressure of the tumor on the brachial nerves, below the axilla. Mr. S. also stated that the treatment of exostoses by mercury was not new, and that he had employed it without any sanguine hope of advantage to be derived from it; he had resorted to it, not with the view to obtain absorption by its local application to each tumor, but by its general influence on the arterial system.

During the treatment of the above case, the urine of the patient was analysed by Dr. Bostock, and was found to deviate far from the standard of health. It appeared from the interesting statement of Dr. B., that the specific gravity of the urine was, on his first examination, as low as 1005, (we understood) and that it was deficient in phosphatic salts, and in general solid contents, prior to the treatment by mercury, and that it approached the healthy standard, containing more solid matter, and rising in specific gravity, as the patient's constitution became influenced by the remedy. When the application of the medicine was suspended, the urine again relapsed into its morbid state, and again improved when the mercurial inunction was resorted to. Dr. B. was not aware whether this condition of urine was a general attendant on the formation of the disease under consideration, but that under all circumstances it would form an interesting subject for inquiry, and for chemical investigation.

Mr. B. Phillips wished to know whether the exostosis mentioned in the case might not possibly be connected with a syphilitic taint in the system, which would account, perhaps, for the efficacy of the mercury.

The President said, that in the absence of Mr. Skey, he would answer the question which had just been asked, and with the less hesitation, as the case had originally been under his own care. The patient, he was confident, was free from any venereal taint; she was a strictly virtuous young woman, and, he had no doubt, was perfectly pure and chaste. He could add also, with regard to the apparent malignity of the disease, that he and his colleagues, at St. Bartholomew's, were unanimous as to the propriety of operating for removal of the exostosis, and only awaited the permission of the girl and her parents to carry the operation, should it prove necessary, to the extent even of disarticulating the shoulder. About this time, however, the dresser who had charge of the case discovered that there were other similar tumors in divers parts of the body; upon which the idea of employing the knife was abandoned. It was then that Mr. Skey came into possession of the case, and treated it with so much success. He (Mr. Earle) thought the observations on the urine were very judicious and valuable.

Mr. Arnott protested against the supposition that it was a new thing to use mercury successfully in non-syphilitic exostosis. For his part, he had been in the habit, for some time, of noticing the practice in his lectures, and was familiarly acquainted for years with the imputed efficacy of the remedy. He had even seen cases cured in this manner; but he added (in reply to a question from Mr. Earle), that no observation had been made as to changes in the urine.

Dr. Copland was surprised that there should be any doubt as to the alleged efficacy of mercury in cases where there was no venereal taint. There was certainly no novelty in the practice; it was at least as old as the time of Van Swieten, who used to give corrosive sublimate, in a tonic tincture or mixture, for the discussion of tumors of the bones. He (Dr. C.), however, was not very sanguine as to the

certain success of such treatment. He had at present under his care a lady, having an exostosis, the size of a walnut, on the os frontis, and neither mercury nor iodine had any effect upon it. As to the changes produced in the urine, in Mr. Skey's case, he could not but withhold his assent to the supposition that they originated in the medicine merely, until he should be fully informed as to the nature of the ingesta, in the shape of food and drink, taken daily by the patient; also as to the time of day at which the urine was voided, and in what quantity it was passed.

Dr. WEATHERHEAD also expressed some doubts as to the changes said to have been effected in the urine.

After this, a short paper on a *Case of Osteosarcoma*, by Mr. LAWRENCE, was read; but no discussion followed.

And in conclusion, an *anonymous* paper was introduced to the notice of the Society. The author, it appeared, was anxious to have it read, but discreetly declined giving his name.

The PRESIDENT put it to the meeting whether they would permit the paper to be read. It was unusual to bring forward anonymous communications; but the Secretary, Mr. Partridge, had been entrusted with the author's name in confidence.

Leave being granted, the paper proved to be a lengthy and very stupid essay *On Small-Pox*, in which the notable idea was started, that in the disease in question there is great excitability of the system, but the remedy is in our power,—small doses (homœopathic?) of tartarized antimony! The announcement of this fact (which constituted the substance of what the author had to say) was given in so prosy and verbose a form, that the patience of the hearers was soon exhausted, and many left the room.

ROYAL INSTITUTION.

Friday, Feb. 10, 1837.

Dr. Ritchie on the Velocity of Sound.

SOME expectations were raised that this would be an interesting lecture: the subject seemed to promise favourably, and an account of new facts and experiments was anticipated. But we must say that Dr. Ritchie made any thing but a popular lecture of it: he began by announcing Newton's theory of the propagation of sound, and then told us of the number of eminent philosophers, Euler, Laplace, Herschell, &c., who were opposed to that theory. He, Dr. Ritchie, considered that Newton was right, and all the others wrong; and accordingly undertook to defend the Newtonian hypothesis, and refute that of the anti-Newtonians forthwith. But what with the needless display of mathematical symbols, chiefly from the integral calculus, and the eternal reference to the chalk and black board, with which the Dr. is so familiar, the audience were far more confused in their ideas of the subject at the end of the hour than at the beginning of it. We have no idea of attempting to give an analysis of Dr. R.'s views; it were a hopeless task, and probably as useless as hopeless. Common sense surely ought to have dictated to any lecturer how such a subject as the velocity of sound might be made both interesting and instructive to a mixed assemblage: we say nothing of the ladies, who evidently expected something of a musical treat.

TREATMENT OF HERNIA.

HERNIA is of such frequent occurrence, that every hint for its palliative or curative treatment deserves to be promulgated. The application of cupping-glasses, or dry-cupping, to facilitate the taxis, has been recommended. How this application acts has not been ascertained; it is said to be most serviceable when the hernia is small, the cupping-glass being large enough to cover the tumor; but the treatment has been had recourse to with good effect even in large herniæ. The plan of Gerdy for radically curing diseases of this class has been tried with fresh modifications by several surgeons, and is represented to have answered well in small herniæ: experiments have likewise been made by Belmas, in support of the same practice. The most recent proposal for the radical cure of hernia is the employment of a firm wooden block (in the place of the usual soft pad) with the truss; and a most excellent report upon the subject has been drawn up by Dr. Reynell Coates and other American surgeons. In reference to operations in this branch of pathology, it occurs to me to mention, that a pound and a half of irreducible omentum has been removed; the very thickened sac of a strangulated umbilical hernia cut away after exposure and reduction of the intestine; the unopened sac of a navel rupture removed by ligature, in more than one instance, after Dessault's method: all said to have been felicitously done. A hernia formed solely of the *appendix vermiformis*, which was found enlarged to four times its natural bulk, produced most of the usual signs of strangulation, and required the operation.—*Mr. Crosse's Retrospective Address.*

MR. S. COOPER AND MR. LISTON.

In consequence of a letter in the Lancet of last week, representing it to be the wish of the students at University College that Mr. Liston should be associated with Mr. S. Cooper in the Chair of Surgery, a meeting of the gentlemen attending the lectures alluded to took place on the 15th, at which a resolution denying the truth of the assertions, and strongly disapproving of the sentiments expressed by the anonymous advocate of Mr. Liston, was unanimously passed.

Mr. Cooper's theatre on Wednesday evening was crowded to overflowing, and he was received in such manner as to shew that he had lost none of his well deserved popularity. From the nature of the address which he made at the close of his lecture to the assembled students, it is quite clear that the plan of forcing a colleague upon him has no chance of success. To use his own words, the chair is not large enough to hold them both, and—if Mr. Liston once got into it, there would be no room for *him*.

PROFESSORSHIP OF ZOOLOGY IN KING'S COLLEGE.

Mr. Rennie having been under the necessity of resigning the professorship of Zoology, Mr. Thomas Bell, the distinguished naturalist, has been appointed to the vacated chair. This is decidedly a good hit on the part of the College.

THE LATE DR. E. TURNER.

We regret to announce the death of Dr Turner, Professor of Chemistry in University College. A more able teacher, or one of higher character as a chemist, will not readily be found as a successor. He had been in a declining state for a considerable time. His funeral, which is to take place this day, at the Kensal Green Cemetery, Harrow Road, will be attended, we understand, by a procession of the students.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

February 16, 1837.

Richard Gardiner Jay, Badley, Suffolk.
Thomas Neats Moody, Woolwich.
John Morgan, Bath.
James George Tatem, High Wycombe, Bucks.
George Jones, Birmingham.
George Evan Evans, Tiverton.
James Probert, Lydbrook, Gloucestershire.
Edward William Holland, Emsworth, Hants.
Arthur William Franklin, Wincanton, Somerset.
Thomas Blanchard, Sunderland.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Feb.* 14, 1837.

Abscess	3	Inflammation	56
Age and Debility	99	Bowels & Stomach	2
Apoplexy	6	Brain	3
Asthma	68	Lungs and Pleura	13
Cancer	1	Influenza	35
Childbirth	2	Insanity	8
Consumption	102	Liver, diseased	2
Convulsions	30	Locked Jaw	1
Croup	1	Measles	6
Dentition or Teething	7	Mortification	3
Dropsy	19	Paralysis	3
Dropsy in the Brain	12	Small-pox	2
Epilepsy	1	Thrush	2
Erysipelas	1	Tumor	3
Fever	8	Unknown Causes	38
Fever, Scarlet	1		
Fever, Typhus	1	Casualties	7
Hooping Cough	12		

Decrease of Burials, as compared with the preceding week . . 40

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Feb. 1837.	Thermometer.	Barometer.
Thursday. 2	from 36 to 46	30·15 to 30·22
Friday . . 3	34 45	30·22 30·28
Saturday . 4	25 39	30·28 30·25
Sunday . . 5	29 38	30·25 30·24
Monday. . 6	21 34	30·25 30·24
Tuesday. . 7	22 34	30·20 30·16
Wednesday 8	24 45	30 09 Stat.
Thursday . 9	from 36 to 49	30·10 to 30 00
Friday. . . 10	41 51	29·91 29.67
Saturday . 11	44 49	29·48 29·08
Sunday . . 12	31 45	29·35 29·38
Monday. . 13	34 51	29·18 29·23
Tuesday . 14	29 47	29·25 29·64
Wednesday 15	23 45	29·88 30·00

Winds S.E. and S.W.

Except the 4th, 6th, and 7th, generally cloudy, with frequent and heavy showers of rain. Hail on the afternoon of the 12th.

Rain fallen, 1 inch and ·075 of an inch.

Charles Henry Adams.

Erratum.—In Mr. Hutchinson's paper, last number, at p. 741, l. 22, *for* "comparative variety of these cases," *read* "comparative rarity of these cases."

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THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 25, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XXII.

Infanticide *concluded. Summary of the signs of respiration and non-respiration—2. Whether the infant died a natural or a violent death? — Appearances indicative of Natural Death—Diseases of the new-born child, congenital and acquired—Atelectasis—Signs of Violent Death — Strangulation — Suffocation — Drowning — Fractures of the Skull—may occur accidentally at birth—or during uterine life—Cases in illustration — Wringing the neck—Wounds, whether inflicted before or after death—Detruncation—Burning —Poisoning.—Question of death from omitting to tie the funis—Exposure—Conclusion, with a summary of the signs of Natural and Violent Death.*

In the last lecture I completed my review of the tests by which the fact of respiration or non-respiration is usually ascertained. Before proceeding to the second important question involved in inquiries respecting infanticide, it will perhaps be useful to sum up, in a general way, the signs by which we are led to conclude whether or not the infant ever breathed, or, if the former, whether respiration took place perfectly or imperfectly. This enumeration of the signs cannot fail to revive your recollection of the several tests, and the modes of applying them.

Signs of non respiration. — The appearances of uterine putridity would of course be decisive; but putting these out of the question, and taking the more ordinary circumstances occurring in practice for our data, we conclude that an infant has not respired,

1. When the form of the chest is flattish and contracted;

2. When the lungs are seen to occupy but a small portion of the chest, and the diaphragm is remarkably convex;

3. When the colour of the lungs is a dark liver tint, and their texture dense and compact, with sharp edges;

4. When the lungs are not above a fiftieth of the weight of the body;

5. When, immersed in water, wholly and in part, they sink—not being putrid, or diseased; facts which observation can readily determine;

6 When the foramen ovale of the heart, and the arterial duct, have evidently undergone no change—the latter being cylindrical in shape, and in calibre nearly equalling the pulmonary artery; and

7. When, in addition, there are none of those signs present which would indicate some continuance of life after birth—such as incipient inflammation about the root of the umbilical cord, or the intestines void of meconium.

Signs of respiration.—The case is clear where those signs are present which obviously show that life subsisted for some hours, and consequently that breathing must have been established; but we should say, with confidence, that an infant has respired—

1. When the chest is full, and arched externally;

2. When, on opening the chest, the diaphragm is not strikingly convex, but the lungs are voluminous, of a bright red or pinkish colour, and crepitous to the touch;

3. When the lungs, heart, and thymus, taken together, swim in water, and all the fragments of the lungs float, even though strongly compressed by the fingers under water, and persist in floating, though reduced to the minutest fragments;

4. When the arterial duct appears to be

diminished in size, and perhaps altered in shape, being conical towards the aorta; and

5. When, in addition, the meconium is found to have been expelled, and certain changes have begun about the umbilicus, conclusive of the fact of some survival of the birth.

Signs of partial respiration.—Unless there be reason to believe that the lungs have been *artificially* inflated, we may infer that an infant has partially or imperfectly breathed, from the following circumstances:—

1. That the lungs are but partially expanded, not filling as much space as they usually occupy in the chest;

2. That the colour of the lungs is not uniform, part being of a dark red or chocolate hue, and part of a lighter or pinkish tint; the latter portions at the same time vesicular and crepitous, while the former are dense;

3. That at least *some* portions of the lungs float in water, though strongly compressed between the fingers previous to their immersion;

4. That the arterial duct is found to be somewhat altered, at least in shape, if not in size;

5. And that there is no marked appearance of any vital process having begun about the root of the umbilical cord.

So much for the proofs of live birth required on trials for infanticide We shall now proceed to the second and more especial inquiry connected with our subject,—

2. *Did the Infant die a natural or a violent Death?*

Supposing the fact of respiration, or of live-birth, to be determined, there still remains a most material question to be decided—namely, whether the infant's death resulted from violence? Unless this can be established in the affirmative, the charge of infanticide must be held to be unfounded.

(A.) *Question of Natural Death.*

Humanity suggests that before entering on an investigation of the proofs of murder, we should first be satisfied as to whether the infant might not have died a natural death.

There will, of course, be a strong presumption in favour of this supposition, when there is a total absence of marks of violence on the body. But such a conclusion ought to be founded on a strict and minute search: for wounds of a deadly kind have sometimes been so ingeniously inflicted as to escape discovery on a moderately careful examination: of this, however, we shall have something further to say presently.

1. *From feebleness.*—The infant may have perished from feebleness. The labour may have been tedious and severe, and the child, consequently, though born alive, may have sunk through exhaustion. Of the probability of this, we must judge from the circumstances. Are there marks of a difficult birth on the infant?—the allegation of a tedious labour is admissible. Does the infant, judging from principles already laid down, appear to have been immature?—the plea that it perished through exhaustion and debility is a fair and may be a valid one.

2. *From congenital disease.*—An infant in the womb may labour under certain diseases, which possibly may become aggravated at birth, and cause death soon after. Where this is supposed to be the case, the medico-legal examiner must exercise his skill in appreciating the morbid appearances which may be present: and he will not only have to satisfy himself of the actual presence of disease, but of disease arrived at such a height as to occasion death. We shall briefly notice the chief maladies found to affect the new-born infant.

(*a.*) *In the head.*—*Hydrocephalus* may exist in different degrees of intensity: the fluid may be simply effused into the cavity of the arachnoid membrane, without influencing in any manner the substance of the brain itself: or, in addition to the effusion into the arachnoid, some may have made its way into the ventricles; in either of these cases life is not necessarily compromised; the infant, unless there be some other obstacle to its surviving, or the lymph poured out be present in very large quantity, can scarcely be supposed to perish immediately after birth, from either of these causes. But suppose the quantity and quality of the serous fluid such as manifestly to have interfered with the development of the brain,—this must be equivalent to an incapacity to live, and in the absence of signs of violence may be considered as having led to natural death. In its ordinary state the infant brain is very soft, and the white substance is comparatively more vascular, or richly supplied with blood-vessels, than in the adult. This fact is worth remembering in medico-legal examinations. A *morbid softness* of the infant brain is characterized by an almost semi-fluid condition of the parts, of a yellowish, sometimes a blood-stained colour, and having a fœtid odour, resembling that of sulphuretted hydrogen. The same sort of softening is sometimes observed in the spinal marrow: and this state is generally accompanied by extensive marks of disease in other organs of the body.

(*b.*) *In the Lungs.*—When mentioning the

objections sometimes urged to the hydrostatic test, the existence of certain diseases of the lungs was alluded to. There may be *tubercles* found in those organs in a considerably advanced state: but this will rarely constitute a cause of death soon after birth. Not so with *engorgement* of the lungs. An infant, to all appearance, may be well formed in every respect, and maturely born: yet it dies immediately after birth, though the delivery may have been easy. The lungs will here most probably be found very voluminous, but gorged with a colourless serous fluid preventing respiration. Sometimes the lungs are, wholly or in part, filled with sanguineous fluid; they are generally at the same time flaccid, and of a granular texture.

Hepatization of the lungs is not uncommon in new-born infants: it is supposed to be the result of inflammation during uterine life. The pulmonary tissue is hard and compact, heavy, sinking speedily in water, and not imparting any considerable colour to that fluid when left immersed in it. In short, the lung in this condition strongly resembles the liver: nor is it in general difficult to distinguish such a state of the organ from its natural state, either before or after respiration.

There is a disease described by Dr. E. Jörg, of Leipzig, which it is important here to notice. It is a morbid condition of the lungs of new-born infants which may lead to their speedy death. It results from the imperfect manner in which respiration is performed after birth, a part only of the lungs being filled with air, the remaining part sloughing or becoming hepatized, or otherwise diseased. This state of the lungs Dr. Jörg has denominated *Atelectasis* (from ἀτελής, *incomplete*, and ἔκτασις, *extension* or *expansion*); and he conceives it to originate in the too rapid and easy delivery of the mother. It is the opinion of this physician, that a slow and rather difficult labour is a process salutary at least to the child; that during the successive stages the fœtus is gradually deprived of its dependence on the placenta, so that when ultimately sent into the world it is in a state nearly resembling that of asphyxia in the adult, and is thus under a powerful necessity to breathe. Children, in other respects of a healthy appearance, are often observed to be weak and unexcitcable after what is commonly called a *lucky* labour; their extremities hang flaccid and powerless, and their cry (if they cry at all) is feeble and whimpering. Such infants sometimes perish, notwithstanding all the efforts that may be made to revive them, and the lungs are then found in the equivocal condition just now alluded to *.

* Die Fötuslunge im gebornen Kinde, geschildert von Dr. Edw. Joerg. Grimma, 1835.

Without entering into any discussion of the physiology or pathology of Dr. Jörg, I have no hesitation in giving full credit to the correctness of his observations. To the medical jurist it is obviously of great importance that the symptoms and appearances of atelectasis should be readily recognized when present; for they not only indicate imperfect respiration, but in many instances *non-viability*, or incapacity for continuing to live—a condition in which no proofs of infanticide, short of the most direct and conclusive, should be sufficient to sustain the charge.

It is worth remarking, that the mucous membrane of the trachea and bronchia is often found red in new-born infants, that the pleura is occasionally injected, and the pericardium not unfrequently contains a lemon-coloured serum.

(*c.*) *In the Abdomen.*—The stomach and intestines, as well as the œsophagus, sometimes present appearances which betoken the existence of disease anterior to birth. Certain marks of inflammation in the œsophagus might even be mistaken for the effects of a ligature applied externally before death, were there other reasons for suspecting that strangulation were attempted. In the stomach, also, it deserves to be noted, ulcerations have been observed, attended with ruddy or dark-coloured discharges, which might easily give rise to suspicion of poisoning.

Such are the principal morbid appearances which might induce the medical examiner to form an opinion relative to the probable occurrence of natural death. It is scarcely necessary to add how much it behoves him to be scrupulous in his inferences, and to recollect that his pathological inquiries may be the means of saving the life of the accused. We now come to consider the

(B.) *Question of Violence.*

There are many ways of destroying the new-born infant; yet the methods usually adopted are not numerous, the deliberate murderer generally taking care to leave as few marks of injury as possible. The mode most commonly had recourse to is—

Strangulation.—It will be kept in mind, that in considering the question of violence offered to the new-born infant, we suppose the fact of respiration already established, and that the child had begun to have an independent existence. The signs, therefore, of the present mode of death must be expected to resemble those indicative of strangulation in the adult, but of course in a less strongly marked form, in consequence of the diminutive size of the parts affected. It were premature here to give a detailed description of the appearances characteristic of death by strangulation:

but it may be stated, in general, that the gorged condition of the lungs, and of the right side of the heart, filled with dark-coloured blood, may almost always be observed.

But the outward signs—will there always be some mark of ligature or pressure on the neck? This is a point upon which much has been said by modern authorities. It was thought, and therefore fairly objected, that marks on the neck, resembling those produced by wilful violence, might be owing to the compression exerted by the mouth of the uterus during labour, or to the umbilical cord encircling the child's throat. But experience contradicts such an hypothesis. An eminent German authority (Klein), whose opinion on the subject, founded on very extensive observation and experience, is now generally adopted by the most distinguished medical jurists, thus expresses himself on the point:—"I have never met with an instance of marks of injury of the kind supposed—ecchymoses or sugillations—produced by the orifice of the uterus, or by the umbilical cord, although I have known a great number of cases in which the neck of the infant had been strongly girded by the funis once or twice twisted round it, strangulation having thus been either actually produced, or rendered most palpably imminent." He then goes on to speak quite as decidedly regarding the pressure of the neck of the uterus; not a bruise, as he tells us, nor mark of any kind, being left on the infant which has perished in this way. We are indebted to the same authority, as well as subsequently to M. Esquirol and others, for a knowledge of the important medico-legal fact, that, even in the adult, strangulation by suspension may be effected in many instances without leaving any appearance whatever of a depression, attended with the least ecchymosis or lividity, on the part of the neck to which the ligature has been applied.

When, however, certain appearances indicating violence are observed on the neck of a new-born infant, we should satisfy ourselves respecting their nature: whether they are the marks of fingers, or of a cord used for murderous purposes. We should scrutinize well the form and position of these marks, and note whether they seem to have been principally directed to the compression of the air-passages.

Whether pressure has been exercised on the parts during life, or after death, is only to be determined by the appearance of an effusion of blood into the subcutaneous tissue, which is usually met with in the former case.

The following is M. Orfila's summary of the signs of strangulation in the new-born:—1. That a circular mark round the neck, with a corresponding effusion into the subjacent cellular tissue, indicates strangulation during life. 2. That though it be impossible to deny that this mark was produced by the orifice of the uterus, or the umbilical cord, yet since no well-authenticated case warrants us in admitting it, it is a natural supposition that the mark in question is the result of criminal violence. 3. That if this mark be combined with appearances denoting that respiration had been previously completely established, our inference must be so much the stronger; for stricture by the neck of the uterus, or by the funis, cannot be supposed to have proved fatal with such appearances. 4. That dark spots on the neck, without corresponding subcutaneous effusion, do not warrant the conclusion that the infant was strangled; but, 5. That, on the other hand, neither does the absence of such spots, or such effusion, or of both together, strictly authorize us to conclude that strangulation did not take place.

Suffocation — Drowning. — Considerable difficulty may sometimes attend the investigation of death by suffocation. But the circumstances of the case will, in general, throw much light upon it. A child, for instance, may be suffocated after birth by smothering in the bed-clothes; by the face falling into the mother's discharges; or by being accidentally dropped into a privy or a night-chair: such accidents are not rare, nor perhaps, in general, will they present any intricacy to the medical jurist. *Smothering in the bed-clothes*, however, is an accident which, in suspected cases, there is no possibility of distinguishing from the same kind of death produced designedly. There is not (in the opinion of an eminent northern critic*) a more easy, effectual, or secret mode of committing child-murder, than this; but fortunately it is hardly ever resorted to; for here, as in most cases of homicide, a great deal more mischief is done than is necessary to effect the purpose in view.

Where substances have been found thrust into the back part of the mouth, with the apparent object of causing suffocation, it is important to determine whether they have been introduced before or after death. When the former is the case, there are generally marked appearances of congestion about the fauces. Suppose a plug or pledget of linen cloth pushed into the pharynx, it must exercise compression on the parts, in proportion to the force employed in introducing it. Hence a peculiar appearance of the mucous membrane—a difference of colour in the situation of the fore and back part of the plug: the membrane is white, and destitute of its natural quantity of blood,

* Edinburgh Medical and Surgical Journal.

where the compression has been greatest—that is, in the farthest situation; whereas, anterior to this, it is red or violet-coloured, thickened, and swollen.

Drowning in the discharges, or other fluids, may be recognized by the ordinary signs of death by drowning, together with the peculiar appearance of the contents of the mouth, gullet, stomach, and air-passages.

It is not necessary that we should here enter into a detail of the signs of death by drowning: the discussion of that subject will be more appropriately entered upon hereafter. Let it suffice at present, that on dissection the lungs and right side of the heart are generally found full of blood, the brain will probably be congested, and in the air-passages a watery froth will be perceived. This last sign is not always present; but when it is, it indicates unquestionably the fact of death by submersion. Also the presence of fluid in the stomach, of the same kind as that in which the body has been found, is a strong proof that deglutition was effected, and therefore that the infant was still living when submerged.

Fractures, blows, and wounds. — Infants have frequently been found with extensive fractures of the skull, such as to raise the strongest possible suspicion that murderous violence had been employed. But in such cases it has commonly been alleged that the fractures were the result of accidental injury—the child, for example, having been expelled from the mother by a sudden labour pain. The late M. Chaussier made a series of experiments to determine whether falls of this description were capable of causing the serious injuries referred to. Fifteen still-born children were allowed to fall perpendicularly, and head foremost, from a height of eighteen inches, on a paved floor. In twelve of them one or other of the parietal bones was broken. When the height was three feet and upwards, the fractures were proportionably greater.

In an interesting trial for infanticide which took place at New York a few years since,* the principal question was, whether a severe fracture of the skull, causing the death of the child, might not have occurred accidentally at delivery. The accused was a young woman of colour, who endeavoured to conceal the fact of her having given birth to a child: but its body was soon found. "The body," as was stated in the evidence at the inquest, "was that of a full-grown male child, which had breathed, and no external marks of violence were visible about it, excepting some effusion of blood, partly fluid and partly coagulated, under the scalp covering the frontal bones, The parietal bones were both fractured, the left in three places, (fig. 31, 1, 3, 4.)

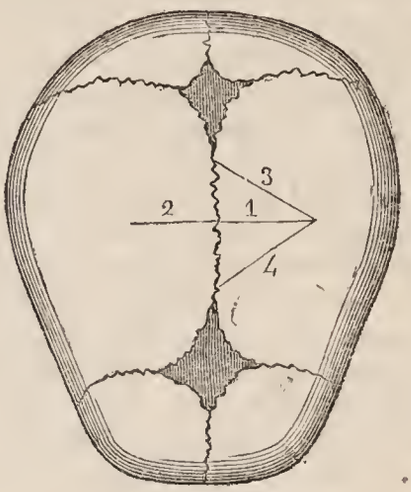

Fig. 31.

radiating from a central point, the right in one (2) which was evidently a continuation of the middle fracture crossing the vertex." Opinions were divided as to the manner in which this injury was produced; one or two of the medical witnesses thought that it was the result of a blow inflicted with a stick or some hard substance, but admitted the possibility of its being caused by a fall from the mother on the frozen ground. Others testified to the probable truth of the prisoner's statement, that she was delivered suddenly, standing in the barn yard, and that the child dropped from her on the frozen gravelly soil: the fractures, too, it was argued, were in the very place where we might expect to find them, had they resulted from such an accident. The court and jury seemed to be satisfied with this view of the case, and the prisoner was *acquitted*.

Thus it would seem to be satisfactorily shown that, in sudden labours, fatal injury may befal the child from the accident of its dropping from the mother. But it should be mentioned that experience does not always warrant this conclusion. Dr. Klein, just now quoted, availed himself of the opportunity he possessed, by his official station in the kingdom of Wirtemberg, to procure returns of all such labours occurring within his jurisdiction. The result was, 183 well authenticated cases, in 150 of which the mothers were suddenly delivered standing; yet there was not a single case of death among them, nor of fracture of the skull, or other mischief happening to the infant; though some of the children had fallen on bare boards, and some on the *pavé*. The reason of the difference between the experiments and those cases occurring in nature is supposed to be, that in the latter the direction in which the body of the infant is projected is oblique, and

* American Journal of Med. Sciences, Feb. 1836; and Med. Gaz., vol. xviii. p. 41.

the fall is not so instantaneous as in the experimental essay. We cannot, however, deny the *possibility* of fracture thus occurring during a natural labour.

In connexion with this subject it ought to be mentioned, that M. Chaussier made some further observations, to show the difference between fractures caused by accidental falls, or during labour, and those produced by violence. The chief differences are, that where wilful violence has been employed, the injuries will most likely be found much more numerous and extensive—for the murderer generally goes on striking till the child expires; and fractures and bruises in this case will commonly be found in parts of the head where the accidents alluded to could not possibly produce them: for example, the bones of the face may be found fractured, or the frontal and occipital bones, or even the base of the skull itself.

I have alluded to the possibility of fractures of the head occurring *during labour*. It should be stated, that there is authority for asserting that such fractures may be caused by pressure, or by the violent contraction of the uterus during parturition; nay, there are well-authenticated cases on record, of children coming into the world with fractures of the skull, which must have happened *during uterine life*. In an able essay recently published by Dr. Schwörer, professor of midwifery at Freiburg*, we have an account of nine such cases, eight of them happening within the experience of Schmitt, Jörg, Siebold, and others; the ninth in the author's own practice. Schmitt met with two cases; the first was one in which, from the fall of a drunken husband, his head striking the belly of his wife four weeks before delivery, the skull of the fœtus was fractured: the child was born alive notwithstanding, though it soon died; but, as Dr. Schmitt observes, had it been born elsewhere than in the Lying-in Hospital, or under circumstances of concealment, the suspicion might have been readily formed that it was destroyed deliberately. In Schmitt's second case, the left parietal bone was fractured during labour, in consequence of the arm coming down while the head was being expelled. Meissner relates a case which happened in Jörg's clinique, where two fissures of the skull were occasioned during labour; and in Siebold's practice the left parietal was severely fractured, the labour being extremely difficult, attended with convulsions, without any possibility of employing instruments. In the case which occurred to Dr. Schwörer, and which gave rise to his clever dissertation, the woman was delivered by the efforts of nature alone, in the Lying-in Hospital of Freiburg. She was subject to hysterical fits, and about four weeks before labour had a fall out of bed during a paroxysm: to this accident the injury found on the child's head at birth was attributed. A large ecchymosis was observed over the right parietal bone, corresponding to a fracture in the part to the extent of about an inch. The child never breathed, though its movements shewed that it was alive at birth.

There is a species of violence which kills an infant at once, and yet may elude the observation of a moderately diligent examiner; namely, the effect of *twisting the head on the vertebral column*. Here there would probably be not the slightest external mark to engage the attention of the medical jurist, nor would the loose moveable condition of the neck form any better guide,—for this is common to all new-born children, especially when the weather is not very cold. The only practical caution that can be given on this point is, that an opportunity of inspecting the internal state of the upper part of the neck ought never to be neglected.

The *wounds* inflicted on the new-born infant, for murderous purposes, are generally confined to the head and neck. Punctures, however, of the heart have been detected, as well as similar injuries done to the head. The story in the *Causes celèbres* of the diabolical French midwife, who used to despatch her victims by thrusting a long needle into the fontanelle as soon as it presented, is well known. In cases of detected puncture, the wound should be carefully traced in all its extent, when it will be generally found that it widens as it departs from the surface, the murderer employing a rotatory motion of the instrument, the more effectually to accomplish the purpose intended.

A very important inquiry respecting blows and wounds is, whether they were inflicted before or after death; nor must it be denied, that there is considerable difficulty, if not an utter impossibility, to decide the question — when, especially, there is reason to suppose that the injuries were inflicted *soon* after death; for then there will be little or no appreciable difference between such injuries and those done a short time *before*. But suppose the wounds produced some hours before death, there ought then certainly to be decided appearances present; swelling and redness, for instance,—and still more marked phenomena, if the injuries were of longer standing.

Another point worth attending to is, to ascertain by what sort of weapon, or in-

* Beiträge zur Lehre von dem Thatbestande des Kindermordes überhaupt, und den ungewissen Todesarten neugeborner Kinder insbesondere. Von Dr. J. Schwörer. Freiburg, 1836.

strument, the wound was made; the form, length, breadth, and depth of each wound should be carefully examined; likewise whether its edges are smooth, or lacerated, or bruised. Too much care, indeed, can scarcely be bestowed on the examination of wounds.

Detruncation and burning.—Deeds of violence of this nature are usually perpetrated for the purpose of conveniently getting rid of the body of the infant. It may be urged that such methods were taken with the simple object of concealment, the child having been born dead. The question then is, can we say whether the body was thus treated anterior or subsequent to death?

Proofs of death by *detruncation* can only be ascertained on the principles which apply to wounds generally: the signs will be the more manifest the more tedious the process employed, and the more early begun before dissolution.

Of death by *burning* we are better supplied with the means of proof. Experiment and observation show that the appearances of burns, as inflicted before death and after, are very characteristically distinct. After death, the application of fire, or red-hot irons, merely chars the part; and if vesicles be produced, they are filled only with air, unless the subject be dropsical or anasarcous, when they may contain fluid. But when burns are effected before life is extinct, decided marks of vital reaction are observable; a blush of redness forms round the part in a few seconds, which, though not wholly permanent after death, never fails to leave a deep crimson line of redness round the burn, not removeable by pressure. Vesicles also are generally raised, which are found to be filled with serum.

Poisoning. — Poisoning has sometimes been enumerated among the acts of fatal injury practised with a view to infanticide. But there is, probably, not a single case on record to show that such a mode of murdering the new-born infant has ever been had recourse to. It is, however, by no means impossible that cases of poisoning *may* occur; and therefore the examination of the contents of the stomach, where there is room for suspicion, ought not to be neglected. Chemical analysis will, of course, be necessary for establishing the proofs; but an account of the particular processes to be adopted must be reserved for another part of the course.

Question of Omission.

There are two other modes of wilfully procuring the death of the new-born child, a notice of which ought not perhaps to be omitted, although they cannot be immediately classed with the preceding forms of criminal violence, nor do they amount to infanticide, in the interpretation, or perhaps the spirit, of our laws. Most of the continental medical jurists divide infanticide into two kinds —as it is effected by commission or by omission. But infanticide by omission, implying that the infant has been wilfully lost through gross negligence, or by denying it certain necessary attentions, is not recognized as a crime by our penal statutes: we indict for murder, or concealment, or not at all.

Yet wilfully *omitting to tie the umbilical cord,* though not always fatal, deserves to be considered as a very criminal act, especially when taken in connexion with concealment. Much controversy has existed relative to the importance or non-importance of putting a ligature on the funis after it has been lacerated, or cut. But though it were demonstrated in ninety-nine cases out of a hundred that no mischief followed the omission, the fact of its proving fatal, even in a single instance, is sufficient to show the danger of omitting it. The infant may perish by hæmorrhage, the signs of which are obvious in the blanched and almost bloodless state of the body, both internal and external; a state which is more likely to occur after the cord has been severed in the usual way, than when torn by the hand.

Exposure.—Death procured by wilful exposure of the living infant, though not absolutely amounting to child-murder within the meaning of our law, must greatly aggravate the crime of concealment of the birth. The signs by which the medical jurist is guided in forming an opinion in such cases, must chiefly be gathered from the circumstances,—such as the time and place, together with the appearance of the body—destitute perhaps of covering, and (though the meconium be all expelled) having no alimentary matter in the stomach.

Having thus examined all the principal points connected with the second question involved in inquiries respecting infanticide, I shall conclude the whole subject by giving, as I did at the end of the first section, a brief *resumé* of the signs of natural and of violent death.

Signs of natural death.—We infer that there is no ground for the charge of infanticide, but that the child, though born alive, sank in the course of nature—

1. When there is a complete absence of marks of violence; or when those discovered may fairly be attributed to accident, or can be proved to have been occasioned after death.

2. When the child is malformed, weakly, or immature, and has apparently perished in consequence of a tedious labour.

3. When there are evident marks of disease, and of a character likely to have terminated fatally.

Signs of death by violence.—Some of these are so obvious as to need no particular description: but where the circumstances are such as to warrant at least suspicion in the first instance, we may be led to a more determinate view of the case—

1. When, with or without distortion of the features, or unnatural aspect of the body, the internal examination shows that some foreign substance was introduced, by means of which respiration was impeded.

2. When the signs of asphyxia, or smothering, are found in the chest, with traces of injury—pressure, with ecchymosis, for instance—about the throat.

3. When, together with the appearances of asphyxia, there is froth in the air-passages, and water, or some of the fluid in which the body was found, in the stomach.

4. And lastly, when the marks of wounds, or blows, or burns, are observed on such parts of the body as would not be likely to suffer from accidental injury; and when such wounds, blows, or burns, indicate, by the appearances of vital reaction, that the infant was not yet dead when they were inflicted.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture VI.

Further remarks on the Treatment of Fever—Management of Delirious patients—Advantages of Tartar Emetic in the form of Enema—Subsultus tendinum sometimes from disturbance of the nervous extremities, independently of the brain or spinal cord—Vomiting and purging at the commencement of Fever, indicative of cerebral affection—Scrofulous inflammation of the brain—Chronic scrofulous fever.

In speaking of the use of drinks in fever, I alluded to the abuse of soda or Seltzer water, and effervescing draughts. It is very much the custom, both in hospital and private practice, to look upon the latter as a remedy which may be administered at the pleasure of the patient, or the discretion of the nurse. They are certainly to many persons a most grateful means of cooling thirst; but the cautious physician will never allow his patient to indulge too much, for he knows that their frequent use distends the stomach, and produces a tendency to tympanites and bowel complaint. I am also of opinion that the exhibition of large quantities of free carbonic acid is a very doubtful, if not a dangerous, practice in fever, and may increase that tendency to narcotism and functional derangement of the nervous and respiratory systems, which is observed in every case of genuine typhus. In addition to this, the evolution of a large quantity of fixed air in the stomach frequently causes a very disagreeable sense of distension and suffocation, and acts injuriously on the mucous membrane.

Allow me here to digress a moment from my subject, and make a few observations on a case which terminated fatally in our wards within the last twenty-four hours. I wish to call your attention to this case more particularly, as I think a different plan of treatment might have succeeded in saving the man's life. This man was admitted into the fever ward about the seventh or eighth day of his illness. I cannot exactly state how he was treated in the commencement, but I believe he was very badly attended, and that the state of the principal organs was wholly neglected. It will be sufficient to state, that when he came under our care the chief features of his case were delirium, accompanied by total want of sleep, and a violence of conduct and behaviour calling for the restraint of the strait waistcoat. Now under circumstances of this nature the most diligent attention and promptitude are imperatively demanded on the part of the physician, and every step calculated to anticipate danger should be instantly taken. I regret to say that I did not at the time take a correct view of the treatment, or precautions necessary to be adopted under such exigencies. I did not expect that the case would terminate fatally in such a short time, and I anticipated benefit from the remedy prescribed. He was ordered to take the tartar emetic solution in full doses; but on visiting him next morning, we found that he had obstinately refused to take his medicine, and that his symptoms were greatly aggravated.

In delirium of this kind it is certainly very difficult to manage the patient, and we are frequently obliged to have recourse to force or stratagem to make him take his medicines. I regret extremely that this man's head was not leeched on his admission, as, from the state of his pulse, I think he would have borne it well. Eight

leeches might have been applied to his temples, and repeated two or three times the same day, according to the state of his pulse and strength. I think I was wrong in contenting myself with ordering the tartar emetic solution and a blister to his head, and I should have anticipated from the violence of his behaviour that it would be very difficult to manage him.

In cases of this kind, where it is necessary to give tartar emetic (and this is one of the best remedies you can employ in cases of cerebral excitement in fever,) you should be always prepared to obviate any omission arising from the obstinacy of the patient; and when he will not take his medicine voluntarily, you may secure its effects on the system in two different ways. In the first place, it may be secretly mixed with the patient's ordinary drink; and as such persons are generally thirsty, and seldom refuse drink altogether, an intelligent nurse will readily find means to make the patient take a sufficient quantity of it to secure its full effect on the cerebral circulation.

Another expedient which you may resort to on similar emergencies, is to give the tartar emetic in the form of enema. I had recourse to this plan some time back, in a similar case of delirium, and with the best results. After leeching the head, I gave the solution of tartarized antimony in enema; and this can be always done, whether the patient likes it or not, if you take care to prevent his struggles by confining him in a strait waistcoat. The best way of administering it is to dissolve two or three grains of tartar emetic in four or five ounces of mucilage of starch or isinglass, and inject it with the aid of a long flexible tube, so as to make the contents of the syringe pass high up into the bowel. In this way you can secure all the good effects of tartarized antimony in overcoming the congestion of the brain, and procuring sleep. In all cases of alarming congestion of the head in fever, I have been long in the habit of using tartar emetic in this way, if the stomach be deranged, and incapable of bearing it safely; and I can assure you that it is a most fortunate thing to have such a powerful resource in all cases of the kind. I have also not unfrequently given expectorant medicines in the same way, where from the state of the stomach, or the debility of the patient, the ordinary remedies could not be administered by the mouth with sufficient rapidity, or in sufficient quantity to produce the desired effect. In this way I have often given the infusion of ipecacuanha—a remedy of very considerable value, and not sufficiently appreciated by most modern practitioners. I may also remind you that vomiting, and all the benefits derivable from it, may be likewise produced in this way. Now where the stomach is irritable, and yet there exists a necessity for such remedies, it is a very fortunate circumstance to be in possession of a means of employing them without inflicting any injury on the stomach, and thus counterbalancing the good effects of the remedy by the injury done to the stomach. Of course the cases in which these expedients are required are comparatively rare, but the practical physician must be always prepared for such exigencies, and be provided with every means of meeting them.

Another of our patients died also within the last few days in the fever ward. He laboured under a very bad form of maculated fever, and when admitted, was evidently in a hopeless state. I shall not say any thing about this case, except to use it as an occasion for making a few observations on a particular state of the cerebro-spinal system, which we not unfrequently observe in cases of maculated typhus, and occasionally in other varieties of fever. Now you observed that this man had not the slightest tendency to sleep; that he lay with his eyes constantly open, raved incessantly, had subsultus tendinum, floccitatio, and cold extremities, and often attempted to get out of bed. Yet we could not find in him any thing like decided evidence of cerebral inflammation. The tunica adnata was of a clear pearl-white, the face pale, and the scalp and integuments of the face cool. You perceive, then, that sleeplessness, delirium, and subsultus tendinum, may depend on a state of the nervous system having no connexion with congestion of the brain, or determination of blood to the head. This occurrence has struck me very forcibly in many cases of fever. But I have been most particularly struck with the occurrence of subsultus tendinum in such instances. In the present case we had a patient with sleeplessness and subsultus. But this concurrence of symptoms does not always exist. You recollect the case of the boy in the small fever ward, who laboured under excessive subsultus, and to whom we gave the spirit of turpentine in drachm doses with so much benefit. Yet this boy, as you all remember, slept remarkably well. I have frequently pointed out to the class patients labouring under subsultus tendinum, who slept well, and in whom the tunica adnata was of a pearl-white colour, without the slightest suffusion. We have subsultus, therefore, occurring in two very opposite states of the nervous system; we have it accompanied with loss of sleep, and we have it existing in that condition of the system where the patient slumbers long and heavily, and cannot be easily

roused. Hence I am inclined to think that the cause of subsultus resides not so much in the nervous centres as in their extremities. I would even go so far as to advance the proposition, that if it were possible for the fever to go on, and life to continue after the removal of the brain and spinal cord, I am quite sure that the subsultus would continue. I am almost confident that subsultus tendinum is the result of some derangement of the nervous extremities. I have shown on a former occasion, when lecturing on the subject of paralysis, that the nervous periphery may become diseased primarily, and without any antecedent affection of the brain or spinal cord. I think it extremely probable that in fever the nervous centres are subject to certain derangements producing coma, sleeplessness, and delirium, but that there are other nervous symptoms which are to be referred rather to a derangement of the nervous extremities, and among the latter I would particularly include subsultus tendinum, a symptom which we find co-existing with such opposite conditions of the nervous centres.

But to return to the case to which I first alluded. Never blister in the early stage of fever, until you have applied leeches in sufficient quantity. In this case, it is true, we could not well ascertain what the period of the fever was; for the man was brought in in a state of delirium, and there was nothing known respecting his previous history. Yet you are all aware that a great deal must depend on our knowledge of the period of the fever, and the medicines which have been employed. Had we been acquainted with these circumstances, it is probable we would not have fallen into the error we committed. What I wish to impress on you, is, that in all cases of maculated typhus, you should be careful in examining the head and ascertaining whether there are any evidences of cerebral congestion present. If there is headache, strong pulsation of the carotids, suffusion of the eyes, and heat of the face and scalp, along with the other signs of functional lesion of the brain present, you should always have recourse to leeching; beginning cautiously, and continuing their application as long as the patient will bear it with safety. When you have the symptoms already mentioned, and the patient is in the early stage of fever, you may commence by applying one or two leeches to the nostrils, or six or eight to the temples, or behind the ears, repeating them two or three times a day, according to the exigency of the case. The best way of using leeches is to apply them in small numbers every six or eight hours, so as to keep up a constant drain from the head. After you have leeched sufficiently, you may then have recourse to blisters. In making this change, much will depend on the sagacity and skill of the practitioner; for it requires no ordinary tact to hit on the proper time when you should give up leeching and commence with blisters.

I shall make no apology for introducing here what I consider to be an important observation, with reference to the pathology and treatment of fever. We had a striking instance of the fact on which I am about to offer some comments, in the case of a little girl who died lately here, in a very remarkable manner. I mentioned in a former lecture, that vomiting and purging in the commencement of fever are, generally speaking, indicative of a cerebral affection. Every fever which commences with vomiting and diarrhœa, whether it be scarlatina, or measles, or typhus, is a fever of a threatening aspect; and in all such fevers the practitioner should be constantly on the watch, and pay the most unremitting attention to the state of the brain. There is much difference between the vomiting and diarrhœa of gastro-enteritis and this cerebral diarrhœa and vomiting. The latter sets in generally at a very early period of the disease, perhaps on the first or second day, and is seldom accompanied by the red and furred tongue, the bitter taste of the mouth, the burning thirst, and the epigastric tenderness. which belong to gastro-enteric inflammation. There is also another source of diagnosis, but of a less valuable kind; and this is founded on the results of treatment. Gastro-enteric vomiting and diarrhœa are relieved by leeching the belly; but I need not tell you that this mode of treatment can have no effect on the vomiting and purging produced by cerebral disease. There is also another source of diagnosis: the vomiting and diarrhœa which results from gastro-enteric inflammation is never accompanied by such copious discharges of bile as that which depends on disease of the brain. In diarrhœa from derangement of the brain, the quantity of bile passed is very remarkable; and it is equally curious, that when vomiting follows derangement of the cerebral circulation, in ordinary cases, and without fever, bile is thrown up in very large quantities. This is frequently observed in persons who become sick from swinging, or sailing. In such instances, a larger quantity of bile is vomited than could occur from mere gastric irritation. Now in the commencement of cerebral disease, where congestion or inflammation is present, one of the first symptoms is copious vomiting, and purging of a bilious character. This is very often the case in scarlatina, and there are few cases in which there is more

danger to be apprehended. We had these symptoms, under very unfavourable circumstances, in the little girl to whom I have just alluded. From the imperfect history of the case which we were able to obtain, it appeared that she had been ill of fever for fourteen days before her admission, and had in addition a severe attack of bronchitis and pneumonia. She then got inflammation of the stomach, and finally congestion of the brain, as indicated by the cerebral vomiting and purging. We employed every means in our power to check these symptoms, but without success; she went on from bad to worse, and she ultimately sank under a combination of affections, which you will frequently observe in many forms of disease as well as in fever; and it is to this point in particular that I wish to direct your attention. You will frequently observe that a certain period of fever, whether it be inflammatory, nervous, bilious, or typhoid,—and very often in other forms of disease, whether depending on a general affection of the system, or connected with inflammation of important organs, when the patient has been going on pretty well for some time,—you will find that about the period when you would naturally expect that the fever would go off, and convalescence begin, a new form of fever makes its appearance, and carries off the patient in spite of all your exertions. To this form of secondary fever I would give the name of scrofulous, because it resembles in its chief features the intractable form of fever which is frequently observed in persons of an originally scrofulous habit, or who have become so from the abuse of mercury or other debilitating causes. This is a form of fever which is not well understood, and I am not acquainted with any author who has devoted to it that share of attention to which, from its great importance, it has such decided claims. Its chief characters are, that the patient, during its existence, exhibits a strong tendency to inflammatory affections, which bear a close analogy to the scrofulous, both in their intractable character, in the facility with which they pass from one organ to another, and in their frequently unfavourable termination. A patient of this description, while labouring under fever, will frequently exhibit a very remarkable succession of inflammatory affections. If, during the course of his fever, he gets an attack of gastro-enteritis, you will have great difficulty in managing it; and no sooner is this overcome, than he is seized with bronchitis or pneumonia; and when, by great care and the most skilful treatment, you have overcome this also, he gets scrofulous inflammation of the brain, and dies. Now you will frequently meet with patients who, during the course of typhus, will be attacked with this bad form of fever, and get what may be termed scrofulous inflammation of the brain, which carries them off in five or six days, in spite of all your care. You are aware that persons who are much in the habit of observing diseases of the brain, can generally distinguish between scrofulous inflammation of the brain and its membranes and that inflammation which occurs in persons of healthy habit. In cases of the latter description, the treatment, if commenced at the first appearance of the disease, is simple and successful. Appropriate bleeding and leeching, with the use of calomel and James's powder, are almost always sufficient to accomplish a cure. When once you have succeeded in touching the gums with mercury, the patient's safety is tolerably certain, and recovery is in general rapid; but in the scrofulous affection of the brain, although you may have fully mercurialized your patient, you will too often discover that you have merely retarded the progress of the complaint for a brief period; it returns again, and carries him off in spite of all your efforts. In the scrofulous hydrocephalus, a much greater time elapses from the appearance of coma and strabismus until death takes place, than in the ordinary forms of meningitis. This fact was well illustrated in the case of the little girl to which I have just now referred: she continued to live on for a long time after the appearance of symptoms which you would think ought to terminate fatally in a few hours after they had become developed. There is also a great deal of irregularity in the way the symptoms come on in cases of scrofulous inflammation of the brain. Sometimes blindness is one of the first symptoms. I recollect having been called, with Dr. Beatty, to see a very fine boy, living in Merrion-Square, and was very much struck, on entering the drawing-room, to find him walking about, and in apparent good health, but quite blind. Here amaurosis was the first symptom. This was subsequently succeeded by others, and he died in a convulsive fit about a fortnight afterwards.

We have many excellent observations on the chronic scrofulous fever, but I think that there is no author who has described this acute form with the precision and care which it deserves. It is, however, a very frequent form of fever, and you will see many examples of it among the chronic patients in the medical and surgical wards. You will frequently observe persons who are labouring under acute disease from accidents or other causes, become feverish and ill again at a time when

you expected a remission of their symptoms, or even recovery; and, without any assignable cause, they will get scrofulous inflammation of some other part or organ, and quickly fall into a state of hopeless and incurable disease.

REMARKS

ON THE

NATURE AND TREATMENT OF RHEUMATISM*.

By J. Hope, M.D., F.R.S.

In speaking formerly, gentlemen, of the "varieties of inflammation according to tissues," I said that acute rheumatism presented the most striking exemplification of inflammation of the fibrous tissue, viz. tendon, ligament, fascia, aponeurosis, the dura mater, and pericardium (of which the external layers are fibrous), the valves of the heart (which contain fibrous tissue between the reduplication of the lining membrane), periosteum, neurilema, and the sclerotic coat, and cornea of the eye.

I told you that any one of these parts might be inflamed individually, and that then the disease was not called rheumatism, but inflammation of the part. But if there be a general tendency throughout the whole system to inflammation of the fibrous tissues, the disease is then denominated rheumatism.

Forms.—Rheumatism, like other inflammations, is, 1. *Acute;* 2. *Chronic:* and the chronic presents two varieties, *a. Active, i.e.* increased local action and heat, mostly with, but sometimes without, constitutional fever; *b. Passive, i. e.* diminished local action, with coldness, and without fever. I shall consider each of these forms in succession.

I. Acute rheumatism, vulgarly called rheumatic fever.—Under this head I do not comprise rheumatism of the periosteum, the neurilema, and the eye—of which, hereafter; but I allude to rheumatism of tendon, ligament, fascia, aponeurosis, dura mater, and the pericardium and valves of the heart.

Local symptoms.—The parts usually attacked are the three great joints of each extremity; more rarely the small joints. There is heat, pain of an obtuse yet severe kind, and, in most, but not all, there is redness and swelling: in short, there are the four local signs of inflammation. The pain is aggravated when the patient is heated in bed, especially at night; also by pressure and motion; whence, and from the swelling, there is more or less rigidity of the joint.

Constitutional symptoms.—The constitutional symptoms are peculiar and very remarkable. The pyrexia, in severe cases, is far more violent than corresponds with the degree of local inflammation, and also of danger, provided no internal organ be affected.

The pulse is from 90 to 110 or 120, full and bounding—not hard—not tense, and incompressible, as you see it in inflammation of serous membranes and inflammatory fever; but compressible, and bounding like the pulse of a healthy person accelerated by running; and by this bound and its speed, it indicates great arterial action. The respiration is accelerated in proportion to the rate of the pulse. The tongue is singularly white, and has a pasty surface, yet without being thickly furred. Bowels confined; urine scanty and high coloured, early depositing a copious lateritious sediment. Skin hot—hotter, indeed, than in most other inflammations; but what is very remarkable, and I believe unique, it usually perspires freely—often profusely; and, in a day or two, the perspiration becomes offensively sour, so that some say they can diagnosticate acute rheumatism by the nose.

These perspirations I regard as an essential *part* and peculiarity of the disease; for they commence simultaneously with it, and, instead of relieving, they only exhaust the patient. The *tolerance of blood-letting* is great; that is, the patient bears much loss of blood without fainting. Finally, the blood is, in general, buffed and cupped in an extraordinary degree; and I have often seen this continue, though the patient was bled to the last ounce that could safely be drawn.

Causes of the swelling.—The swelling is occasioned by vascular turgescence, and by serous effusion into the fibrous and cellular tissue—that is, œdema; and with this you will sometimes find a little synovial effusion into any contiguous synovial membranes—namely, of sheaths of tendons, bursæ, and joints. This you would naturally expect, as the inflammation is propagated from the fibrous tissue to the synovial membranes by contiguity of tissue, according to the well-known principle of Bichat. The swelling from these causes is inconsiderable. This is the kind of swelling in the great majority; my impression would lead me to say in 19-20ths.

In the remaining 1-20th there is little or no serous effusion into the fibrous and cellular tissue, but a very copious synovial effusion. This fact was, I believe, first

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* Being an abstract of a lecture delivered recently at the Aldersgate School of Medicine.

noticed and taught, in his lectures, and in the wards of St. George's Hospital, by Dr. Chambers; and he made it the ground of a practical distinction into "*fibrous*" and "*synovial*" rheumatism.

In "*fibrous*," the swelling is diffuse, pits on pressure, and is inconsiderable in degree; and this variety alone is attended with the violent constitutional fever, such as I have described it.

In "*synovial*," the swelling takes the form of the particular synovial membrane affected: it is elastic and fluctuates, and may enlarge the joint even to double or triple its natural size. Dr. Chambers remarked that the fever was not of the violent kind which attends fibrous rheumatism, but a much milder degree. I have noticed, that though the fever is occasionally smart at the onset, it subsides as soon as the effusion becomes considerable, —that is, within three or four days; a circumstance attributable, I presume, to the effusion relieving the inflammation, which is nature's own mode of affording relief. After the effusion has taken place, the complaint assumes a more chronic form, with little symptomatic fever; is removed more slowly than fibrous rheumatism, and is more benefited by local treatment: in short, it becomes more strictly a local complaint—more a mere effusion into the joint. The knee is, beyond comparison, the most frequent seat of synovial rheumatism, but any other joint *may* be affected; and the small joints are, according to my observation, more obnoxious to this than to the fibrous variety. The lower classes, indeed, know it practically under the name of rheumatic gout, though there be no gout in the case.

Rheumatism rarely suppurates.—A peculiarity of rheumatic inflammation is, that it scarcely ever ends in suppuration—some say, never; and that when suppuration does occur, it arises from some other inflammation, either accidentally present or excited by the rheumatism. Thus Bouillaud relates two cases of what he considers to be acute rheumatism, terminating in suppuration; but in both, phlebitis attended the rheumatism, and was pretty evidently the cause of the purulent effusion amongst the muscles and tendons. Dr. Macleod also mentions two cases of purulent effusion into the synovial membranes (Med. Gaz. vol. xvii. p. 655); but, in both, the disease had become "persistent" in the joints affected—the hip and shoulder in one, and the hip in the other. Here, then, the rheumatism may have degenerated into mere chronic inflammation, which, of course, may suppurate. The strength of the whole argument turns principally on this point—that if rheumatic, did not differ from common inflammation, we ought to find suppuration in the acute stage. Of this, however, I have never myself met with an instance, though I have seen no small number of cases; nor have I been able to find a case on record which did not seem to admit of a double explanation. On the whole, therefore, I think we may conclude that rheumatism has the peculiarity of not tending to suppuration; and that when it occurs, it is an exception to the general rule. Mortification is still rarer than suppuration.

Migration of acute rheumatism.—Migration is another striking peculiarity of acute rheumatism. In general, two, three, or more joints, are primarily affected: then it leaves some of these, and attacks others, or other parts; and occasionally it revisits the joints originally affected. The joint which it leaves is promptly eased of pain, but not necessarily so of the swelling; for if the œdema is considerable, a day or two may be necessary for its absorption.

By far the most important of its migrations is to the fibrous tissue of the pericardium and valves of the heart. That to the dura mater is comparatively less important, because very rare: I have never seen an instance: whereas migration to the heart is exceedingly common. It occurs in perhaps one-half, if not counteracted by suitable treatment. Thus M. Bouillaud rates it at half, including the cases of inflammation of the valves, which he says with truth is almost invariably overlooked by non-auscultators.

If, then, you consider that, independent of the *immediate* danger of pericarditis and endocarditis, an adhesion of the pericardium, or a disease of a valve, so frequently entailed by these diseases, necessarily cripples a man for life, and often contracts his existence within the span of a few years, you at once see that acute rheumatism, formerly considered harmless to life, is really a disease of the first magnitude and importance, and always to be regarded with anxiety.

Metastasis.—The migration of rheumatism to the heart or head used to be called and considered "metastasis,"—that is, a change of seat,—a total desertion of the external parts, and a concentration of the disease on the internal organ. But this idea is erroneous, and, I trust, becoming obsolete; for I have often seen the heart attacked while the disease was in its full intensity in the limbs,—nay, I have even seen the heart attacked first! The disease, therefore, merely extends or migrates to the internal fibrous tissue, just as it does from joint to joint, by what Bichat calls the affinity of tissue.

Rheumatism a specific inflammation.—Rheumatism has long been considered a "*spe-*

cific" inflammation,—by which I mean, one not presenting the usual phenomena, nor running the usual course of common inflammation. John Hunter was of this opinion. It has of late, however, been questioned with ability; yet I confess I adhere to the old opinion, and on the following grounds:—

1. The migration to all parts of the fibrous tissue is unique. You see it not in inflammation of any other tissue, nor even in common inflammation of the fibrous tissue.

2. The very slight tendency to suppuration, ulceration, and adhesion, is peculiar; for all these processes are common in ordinary inflammation of fibrous tissues, as from injuries, &c.

3. The perspirations are unique; even the whiteness of the tongue is singular.

4. The excessive buffing and cupping of the blood, sometimes even after the utmost possible venesection, is extraordinary, and seems to indicate something peculiar in the constitution of the blood.

5. Experience shows that this disease is less certainly and uniformly relieved by antiphlogistic treatment than other inflammations.

All these circumstances evince, I think, something peculiar — "specific" — in the system, or, if you please, in the vital constitution of the blood, which, I believe, is M. Andral's opinion.

I have dwelt a little on this subject, not from the love of idle speculation, but because, if the inflammation be specific, we are not rigidly bound in the treatment by the ordinary principles of inflammation, if we find them less than usually successful; but are justified in circumspect deviations, approved by experience.

II. Chronic Rheumatism.—This, I said, may be "active" or "passive."

The symptoms of active chronic rheumatism are much the same in quality as those of acute, but less in degree. Though the disease has lasted many months, you may still find the parts, from time to time, more or less painful, hot, swollen, and even red, and the pain aggravated by heat. There may also be a moderate degree of symptomatic fever, the pulse ranging from 80 to 90. Sometimes, however, there is no symptomatic fever, the activity being strictly local. You will seldom find perspirations, as they cease after the few first weeks.

This chronic form may either be the sequel of the acute, or be primitively chronic; and I have often noticed repeated chronic recurrences in those who had once had acute. * * *

Age.—I have not found acute rheumatism very frequent before æt. 6, and after 60. The most common period of its prevalence is from æt. 8 to 35, during which it is, beyond comparison, the most frequent cause of peri- and endo-carditis. I have ascertained this almost numerically in a great number of cases.

Modes of Treatment. — The treatment of acute rheumatism has been—nay, is—very unsettled. There is the bleeding and purging plan; the forced sweating plan; the stimulant plan—that is, with bark, guaiacum, &c.; the colchicum plan; the calomel and opium plan; and these variously combined. The importance of this disease, especially with reference to inflammation of the heart, has led me to pay much attention to its treatment for the last eight or ten years; and I have made brief notes of between two and three hundred cases, and observed many more. My object was to curtail, if possible, the exhausting six weeks' treatment of the old school, and to ascertain what mode would best obviate that truly formidable complication, inflammation of the heart. As my opinion is now pretty decidedly formed, I shall offer you the results of my experience.

1. *The bleeding and purging, or pure antiphlogistic plan.*—From ten to twenty years ago, this and the diaphoretic plan were in full vogue, especially in Scotland; and I saw them carried to their maximum in the Edinburgh Infirmary, during a residence of two years in that institution. Now many cases, I admit, were promptly and effectually cured — even annihilated at once, by the antiphlogistic plan; but, in many others, active bleeding was carried to the very last ounce that could be drawn; yet the enemy clung to the joints with a chronic grasp, and proceeded triumphant in his crippling career. Add the pale emaciated frame, and the slow convalescence, sometimes of two or three months' duration, and too often, I fear, the permanently shattered constitution; add, above all, inflammation of the heart not prevented: nay, it is a trite remark, and by none made more strongly than by Dr. Alison, "that large and repeated bleedings in the beginning of rheumatism, he is convinced, *increase* the risk of this metastasis.*" Dr. Macleod has, however, ingeniously and fairly met this argument, by saying, that it is only in the worst cases, and consequently those in which migration to the heart is most *likely* to occur, that copious bleeding has been employed. Still the fact remains, that inflammation of the heart is not *prevented*, and prevention is the great desideratum.

The forced sweating plan.—Dr. Gregory,

* Cyclopædia of Medicine: Hist. of Med., Part xxiv., page 45.

the great advocate of this plan, premised venesection and purging till the pulse was lowered to 100; but "with these appliances and means to boot," I have seen patients stewed and parboiled (if you will excuse a culinary trope) for four, six, or eight weeks, and gain — what? — a wan attenuated frame, chronic pains, and a confirmed susceptibility of rheumatic attacks on the slightest variations of temperature. This plan is now, I think, almost universally abandoned,—by those at least who keep pace with modern science.

The stimulant plan.—It was principally Morton, Fothergill, and Haygarth, who gave bark from the first, or nearly so; and I have seen others give guaiacum (a stimulant and diaphoretic) in the same way. I have not myself tried these remedies, because I never think myself justified in employing remedies distinctly opposed to reason when I know of others equally efficacious which are consistent with reason; but I have looked on the treatment of others; and it has always appeared to me that the patient has recovered in spite of the remedy, and in virtue of the bleeding, purging, calomel, or low diet, which was simultaneously employed, and to which in some cases the practitioner was compelled to resort at an advanced period of the treatment. Bark, however, is good in a weakly convalescence, just as after any other inflammation.

The colchicum plan. — Colchicum is a powerful remedy, and, with antiphlogistic treatment, often succeeds well. Those who are most partial to it generally consider that its most striking effects are produced when it purges; and to promote this they often conjoin with each dose magnes. carb. ℈j. or some other neutral salt. It is apt, however, in full doses of ʒss. to ʒj. or ij. to produce an intractable dysenteric diarrhœa, which upsets all your plans. I have so often been foiled by this circumstance, that I now use colchicum only as an auxiliary, in small doses of ♏xv. to xx. frequently repeated. In this way I use it much.

Calomel and opium plan. — This was introduced for acute inflammation in general, and for acute rheumatism in particular, by Dr. Hamilton of Lyme Regis, fifty years ago*. He bled once or twice, and touched the salivary glands with mercury, with brilliant success. But there is an objection to unnecessary salivation. A modification of this plan, by which ptyalism is avoided, I first saw employed by Dr. Chambers, at St. George's Hospital. It is to this plan that I wish particularly to call your attention; and, leaving the merit to him, I shall give you my own experience of it during the last six years, in about 200 cases of acute or active chronic rheumatism.

1. *Acute.*—After a full venesection, or even two, in the robust, but without bleeding in the feeble and delicate, I give every night gr. vij. to x. of calomel with jss. to ij. of opium, according to the age, and the severity of the case; and every morning a full haust. sennæ, to act four or five times at least. In addition I generally give the following draught, thrice a day, as it has appeared to me to expedite the cure—partly, perhaps, by the additional opiate, and partly by the sedative effect of the colchicum.

℞ Vini colch. ♏xv. ad xx.; Pulv. Doveri, gr. v.; M. salin. ʒx.; Syrupi, ʒj. M.

When the pain and swelling are greatly abated, if not almost gone, (which often happens within two days, and almost always within four,) I omit the calomel; or if the gums become in the slightest degree tender, I omit it even earlier. The opium I continue to the extent of gr. j. or jss. at bed-time; and in severe cases I add a grain at noon; for without an anodyne the pains are apt to recur. I also continue the colchicum draught and the haust. sennæ, as before.

No local treatment is necessary beyond warm or cold application, according as the patient finds them agreeable.

If the patient is not well in a week I consider it a case of exception; and the exceptions are generally in those who are subject to rheumatism, and who therefore usually have it in a more obstinate chronic form.

The advantages of this plan are, 1, that a patient is generally sound, well, and fit for work in a week or ten days after the pains have ceased; 2, that the gums are rarely affected, especially if you previously ascertain that the patient has not a morbid susceptibility of mercury; 3, that it is rare to see inflammation of the heart if the treatment is early begun (I think that one case in a dozen would be the maximum in my practice); 4, if the slightest symptom of endo- or peri-carditis *does* supervene, a few extra doses of calomel and opium, as gr. v. c. op. gr. j. every four or six hours, will generally affect the constitution in twenty or thirty hours, which, with two or three cuppings or leechings on the region of the heart, almost always places the patient in a state of safety. I have never lost a patient by rheumatic pericarditis since I employed this plan; and I have been told by other hospital practitioners that they

* In 1783. See Med. Commentaries.

have been equally successful by the use of calomel and opium.

2. *Chronic active.* — Here calomel and opium may be given in smaller doses, as calomel, gr. v. and opium, gr. j. every night; but they require to be continued for a longer time, as five or six nights. Take care, however, to stop short of ptyalism, especially in the scrofulous. Local treatment, too, is more beneficial than in the acute form: viz. bleed locally rather than generally, and ultimately employ blisters, liniments, &c.

Trials of modifications.—I have tested this plan by successively omitting the venesection, the purging, the calomel, and the opium; and with each omission I have found the recovery less expeditious and certain. I cannot doubt that the opium contributes importantly to the cure,—perhaps by allaying the pain, and thus diminishing the irritative fever dependent on it; or, possibly, by modifying the vital state of the blood: but this is yet hypothetical. I have, however, assured myself of the fact, that opiates and purging alone will cure many cases of acute rheumatism remarkably well. Others, too, have used narcotics with success. I think Dr. Hue, of St. Bartholomew's Hospital, treats acute rheumatism with large doses of conium, as ℈j. or more daily; and my friend Dr. Lombard, physician to the hospital of Geneva, states that he has had remarkable success with the spirituous extract of aconite, in doses of gr. ss. gradually increased to two or even three grains, every two hours.

Treatment of synovial rheumatism.—Calomel and opium produce less striking effects on purely synovial rheumatism, because the inflammation soon relieves itself by the effusion, and the effusion requires time for its absorption. Yet I am satisfied that mercury does expedite absorption in this as in any other effusion. Colchicum, however, has the reputation of producing its best effects in synovial rheumatism. I have oft looked for "heroic" effects, in vain; and I suspect that they are rather over-rated: yet it is a good remedy. Whether you use calomel and opium, or colchicum, or both, for synovial rheumatism, you will find that local applications are more necessary and serviceable than in fibrous rheumatism, viz. leeches, c. cruenta, cold lotions, hot fomentations, and poultices; and later, blisters, stimulant liniments, and plasters, &c. Leeches and blisters should never be placed immediately upon a superficial joint—I have seen them create ulcers which penetrated the joint and proved fatal. * *

CHARACTER OF THE PREVAILING INFLUENZA.

To the Editor of the Medical Gazette.

Sir,

Having perused in your valuable journal of the 4th inst. the letter of Mr. Henry Bullock, on the Nature and Treatment of Influenza, wherein he ascribes the former to specific contagion, permit me, through the same medium, to dissent from him, basing my objection on the immediate percursory atmospheric change. I am aware at the same time that there are very high, though not undeniable authorities against me, viz. Cullen, who designates it in his Nosology and First Lines, *Catarrhus contagiosus;* and Dr. Gregory, in following him, admits there are many opponents to such an opinion.

Here, at the latter end of December and beginning of January the cold was extreme—considerable quantity of snow fell in a comparative short time; this was succeeded by a hard and severe frost, then again as sudden had we a rapid thaw, followed by strong westerly gales, and much rain. Quick upon this change the list of my dispensary patients increased during the last week of December to 13 more than ordinarily, 45 in the whole of January, and 40 in this fortnight of February, all of which were catarrhal cases. I could not help noticing at that time the prevalence of a similar epidemic among the quadrupeds in general.

One may at first be inclined to ascribe so universally undiscriminating an effect to contagion, but is not the rapid and extensive atmospheric mutation preceding the disease most apparently the true origin. Have we not in that change the cause? and can we find any contending difficulty against designating this sequent epidemic as the effect?

Since it is admitted that a partial sudden atmospheric change produces benign catarrh, it is but reasonable we should conclude that a more powerful, more sudden, and more illimitable vicissitude, conjoined with concomitant humidity of the weather, will be an efficient cause for the origination of our present prevailing epidemic, without searching for the additional aid of specific contagion. Perhaps Mr. B. can explain

in which manner this contagion propagates, whether by visitorial intercourse—by exposure to the local sphere of the ambient poison—or by the universal extension of undefined, subtile, atomic particles of a contagious something floating in the air. If the latter, we are far more likely to have influenza raging duringthe æstival than the brumal period of the year; in the former season contagionists could avail themselves of much collateral acquisition in support of their peculiar opinion. Were we to reason by analogy respecting the contagiousness of this disease, we might have naturally expected to receive the poison by respiring the morbific atmosphere, by actual contact or cuticular imbibition, as in rubeola, scarlatina, typhus, and others.

Extending this analogy a little further, we might reasonably anticipate the morbid secretion of the mucous membrane of the nose possessing the capacity, by inosculation, of superinducing a similar disease, as the endermic absorption of a like morbid mucous secretion produces glanders in horses; and again, as canine saliva the hydrophobia. These facts establish an axiom, that contagious diseases exciting morbific secretions are capable of generating their kind; but this epidemic has not such a power.

Ascribing catarrhus communis to cold and change of weather, yet denying it to catarrhus epidemicus, seems to me evincing a warped judgment. Does not every person know that he risks a common cold by rushing from a calorie temperature of about 90°, in crowded theatres and overheated rooms, to a frigorific one of about 40°, in the external air?

Then, if each individual is liable to catarrh from so partial a cause, is it not consonant with common observation to expect, in the populace at large, the aggravated symptoms of a similar disease, when the cause of it only differs in its universality?

Now to the treatment. Both Cullen and Gregory describe the influenza as an inflammatory disease, that being considered by them the characteristic symptomary difference between it and the catarrhus benignus: hence, as Mr. Bulloek adopts their nosological views, we might have been led to expect his treatment in accordance. On the contrary, he finds bleeding (which they recommend) decidedly injurious, and protractive of recovery, by exhausting the constitutional powers. I have much pleasure in bearing testimony to the justice of Mr. B.'s denunciation of the full depletory plan in London; but here in the country, even when the symptoms only similate inflammatory action, one general bleeding, or repeated if requisite, is had recourse to; and when the local pain in the forehead or temples is acute, or a feeling of heaviness and giddiness in the head, the topical application of leeches has been attended with the happiest effect.

Why there should be such a disparity in treating the same disease in town and country, may be very easily explained, by considering that the stamina of the constitutional powers of the metropolitans are not so vigorous as those in the country. This is one, and, I think, a cogent reason, why Dr. Armstrong changed the opinions he promulgated in his works on Fevers soon after he practised in London; for it is generally known that he recanted his published theory, and altered his practice. The adoption of his views proved very uniformly successful with me, where one of the largest country practices offered me the ample means of putting Dr. Armstrong's practice to the test of experience; and no doubt Mr. B. will feel the truth of my assertion, on learning it was the seat of his first pupilage. I have also had considerable experience, during two years of hospital study in London, around Mr. B.'s immediate neighbourhood, among the lowest of the low—poorest of the poor—a genuine colony of gin-tipplers.

Impressed with a firm conviction of the excellence of Dr. Armstrong's practice, I carried it into operation among those individuals; but I quickly found my error, for the result of my treatment was the distressing collapse and protracted recovery of those in whose cases bleeding was fully resorted to, though the extent of such depletions was not carried so far there as I had priorly done in the country, with decided benefit, in similar acute inflammatory diseases. I also discovered that my town patients could not endure the powerful effects of my country doses of purgatives, were salivated quicker, and by lesser doses than I had been in the habit of prescribing. Surprised at this, I mentioned it to my friend Mr. Clarke,

the then surgeon for the parish of St. Olave, and now for the Union; he explained, and to convince me the more, he, in the next cases, commenced a milder plan, viz. less depletion, and when repetition was required, careful not to abstract indiscriminately: the medicinal auxiliaries were the same, but diminished in the dose. These instances, thus treated under Mr. Clarke's surveillance, to my infinite surprise and pleasure, rapidly recovered without a decimal portion of comparative debility.

I have intruded these observations to corroborate the aptitude of Mr. B.'s treatment for citizens, and to mark more widely their inaptitude for country adoption. I felt this the more necessary since your extensive publication may induce junior country practitioners to follow those measures which I hesitate not to declare they will find full of disappointment. The present epidemic has raged in this country very universally, and with unusual severe symptoms of the inflammatory kind; insomuch that private practitioners have been dubious whether to class it as the catarrhal epidemic, or purely as one of its own kind—a general inflammatory one; for three-fourths of the cases attacked with all the usual precursory symptoms of catarrh, set in pneumonitis, pleuritis, bronchitis, and rheumatismus acutus. I would also observe, that in all the townships to the extent of 12 miles around Manchester, I have ascertained that the mortality is, and has been, very great. The majority have died from uncontrolled inflammations; some of apoplexy. Several old people, chronically affected with bronchitis and asthma, have had these diseases so aggravated by the prevailing epidemic, as ultimately led to their deaths. I have several cases of idiopathic and symptomatic epilepsy, much aggravated both in frequency and severity of the fits.

To specify the symptoms of influenza as I have found it here, would be only reiterating what has been better expressed by yourself; suffice it to state that they have been with variations of the inflammatory kind, for which my treatment has been in accordance. When they have come to me, suffering under the oppressive stage, with much congestion in either organ, I have bled as freely as the urgency of the symptoms demanded, guided by the relief it afforded to the patient's feelings, and produced on the action of the heart; and did my attendance happen to be required when the second stage had supervened, then again I bled to diminish the high and general excitement: of course the stomach and bowels were also promptly attended to, succeeded by the use of antimonial and saline adjuvants. Such has been my practice, and I flatter myself with its uniform success, not having had one death in near one hundred patients.

Should this letter be deemed worthy of space in your valuable periodical, its insertion will oblige

Your humble servant,

W. W. Morgan.

Bury Dispensary, Feb. 16, 1837.

ABSCESS OF THE LIVER.

To the Editor of the Medical Gazette.

Sir,

It has been suggested to me since I had the honour of transmitting to the Medical Gazette of the 4th inst., the brief account of a post-mortem examination of a woman who died of an extensive encysted abscess of the liver, that no notice was taken in the report of the *state of the gall ducts;* and as the same observation may probably have occurred to other of your readers, perhaps I may be allowed to state a fact which had previously escaped my memory.

Upon first viewing the extensive destruction which the liver had sustained, it was a matter of surprise that no decided symptom had manifested itself during life upon which to ground a probable diagnosis, but it appeared on a more minute investigation that the ducts, viz. the ductus hepaticus, the ductus choledochus communis, and the ductus cysticus, although surrounded on all sides by disease, were pervious, and perfectly *free for the transmission of bile into the duodenum.* This circumstance, coupled with the fact of the comparatively healthy state of the digestive canal, accounts for the absence of jaundice and discoloured skin, (from both of which the patient was free,) one or other of which has been described by some authors as the invariable concomitant of hepatitis.

I am, sir,

Your most obedient servant,

R. H. Allnatt.

Wallingford, Feb. 15th, 1837.

INFLUENZA
AT THE
ST. MARYLEBONE INFIRMARY.

To the Editor of the Medical Gazette.

Sir,

In reading your last number, I have observed one or two inaccuracies in my "Notice of the Influenza," which I should be glad to be allowed to rectify. In giving the total of deaths in the wards in the six weeks ending Feb. 10 last, I have included about 20 not belonging to the admissions of that period, but to those of the last year, without having sufficiently distinctly stated the circumstance, although important in its relations to the question of mortality. In the table of ages also the same inaccuracy occurs from, I believe, the same cause, viz.—haste. You will oblige me by giving early insertion to the accompanying more correct statement. Perhaps I may mention before concluding, that the total of cases of influenza occurring during six weeks in all the departments of the practice of the infirmary, which I estimate in round numbers at between 900 and 1000, does not, from want of data, include any attacks occurring in persons resident, whether as officers, servants, or patients in the infirmary, at the beginning of that period, although such instances were numerous. Let me add that, with us at least, the epidemic may be considered as gone by now for a week or ten days: during the last week only two cases having been admitted for that disease.—I remain, sir,

Your obedient servant,

John Clendinning.

Wimpole Street, Feb. 21, 1837.

Total of patients in the Marylebone Infirmary, Dec. 31, 1836 216

Total admissions, medical and surgical, between Dec. 30, 1836, and Feb. 10, 1837 465

Total treated in the Infirmary in the six weeks ending February 10, 1837 681

Total of deaths in the six weeks in the Infirmary 118

Of which belonged to the admissions of the year 1836 20

Leaving on the admissions of the six weeks ending February 10, 1836, deaths..... 98

Or a mortality on the admissions of $\frac{465}{98} = 22$ per cent. nearly.

Table of Ages of all Cases admitted into the Wards of the Infirmary, between Dec. 30th, 1836, and Feb. 10th, 1837.

Ages of all Cases.	Admissions.		Deaths of the admitted.		Influenza Cases: both Sexes.
	Male.	Female.	Male.	Female.	
Under 12 months..	5	4	1	2	5
1 to 5 years....	15	5	—	—	3
5 — 10	17	24	—	1	15
10 — 20	40	33	3	2	35
20 — 30	21	40	3	5	28
30 — 40	34	26	11	4	33
40 — 50	27	27	10	7	26
50 — 60	36	25	14	8	41
60 — 70	22	30	6	10	35
70 and upwards..	21	11	9	2	26

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Anatomie der Mikroscopischen Gebilde des Menschlichen Körpers (Anatomia Partium Microscopicarum corporis Humani). Von Dr. JOSEPH BERRES, Professor der Anatomie an der Wiener Universitat. Wien, 1836. Schloss.

WE have here a portion of a splendid work, which we foresee will have an extensive celebrity ere long, wherever medical science is cultivated.

Without anatomy there can be no physiology; this is now an old truth. But it is only comparatively recently that it has become generally acknowledged that there can be no rational account given of the functions of any part until the structure of its tissues is thoroughly known. Who, for example, would attempt to explain the action of the lymphatics in digestion without being familiarly acquainted with the texture of the parts, suitably injected and microscopically examined? Can the secretions of any membrane, gland, or organ, be even plausibly accounted for, without an accurate demonstration of the parts concerned?

The value of microscopic investigation has long been admitted; but not universally. The sceptics have always been in the majority: they have refused to believe what they had not themselves an opportunity of seeing; and in some instances they have refused to see what, if acknowledged as real, would overturn their theories.

Leeuwenhöck, Ruysch, Lieberkühn, Prochaska, Spallanzani, and others, have left us admirable examples of what could be done by talent employed in this way, even with inferior instruments. But since their time much has been achieved. In our own day we have had a number of observers, whose discoveries will perhaps never pass into oblivion. Every physiologist is familiar with the names of J. Müller, Burdach, Ehrenberg, Purkinje, Weber, Krause, Breschet, &c. These distinguished explorers of structures have presented us with the results of their invaluable researches; but it must be confessed that when combined, their works do not always exhibit uniformity or harmony with each other.

It is with a view to obviate this imperfection that Dr. Joseph Berres, the eminent Professor of Anatomy at Berlin, has undertaken to give a complete and uniform series of microscopic observations of the minute structures of the human body.

In a learned preface he developes his plans, and states his appliances and means. He tells us that his emulation was excited by the treasure of microscopical preparations which they possess at Vienna, from the hands of Lieberkühn, Barth, and Prochaska. With the compound microscope of Plössl (an artist whom he praises in the highest terms), he was enabled to appreciate the excellence of these, but at the same time to see that they were far from being perfect.

His present criterion of the excellence of a preparation suited for microscopical purposes is this—to be able to distinguish the anastomosis of all the vessels even in the minutest twigs, and to discern their perfect detachment or separation from the surrounding organic matter. Every vessel is to be traceable continuously and without interruption through its entire course. How he and his assistant Dr. Hyrtl manage to effect these exquisite preparations is fully explained.

We ought to state Dr. Berres' arrangement. He divides the work into three chapters.

In the first, which is introductory, he explains all that appears essential for the better understanding of the subsequent parts; every thing relating to the use of the instrument which he employs, and to the mode of instituting the observations with the best effect, is laid down for those who wish to verify the results themselves.

In the second, the minutiæ of the various organs are microscopically explored, and the most prominent and important objects among them depicted and described. Those among them which seem to claim most attention in a surgical or physiological point of view, are dwelt on more particularly.

The third chapter is to contain a sort of digest of the materials collected. It will be an attempt to arrange, in a philosophical order, the numerous and wonderfully various observations, so as to

found upon them a fair induction, with as little risk as possible of any ill-concerted theory.

With respect to the instrument—the *Plösslische mikroskop* — used by Dr. Berres, it is figured in the first plate, and would not be considered by mieroscopists here as more than an ordinary instrument in its external appearance. It possesses four aplanatic eye-glasses, composed of two achromatic lenses each, and is furnished with six objeet-glasses, all of them achromatie and aplanatic. The power of enlargement commonly used by the Doctor is 110 diameters; but he frequently applies a power of 750, as in viewing the globules of the blood, and he says he can augment his magnifying power to double that number.

As an instance of the exaggeration which at no distant period was to be met with in deseribing the powers of instruments, the author tells us that he has in his possession Proehaska's microseope, whieh was said to magnify 400 times lineal measure; but upon examining it earefully, its powers are found not to exeeed 28.

Eaeh fascieulus contains two plates, fine speeimens of the powers of lithography, with letter-press in German and Latin.

In the first plate we mentioned that the mieroscope is represented. The second is devoted to plexuses of minute veins and arteries, beautifully delineated in their principal varieties of form. The power here employed is 110 diameters.

Plate the third exhibits various vascular net-works, some of them seen by a power of 540 linear. In the fourth we have the elementary parts, sueh as the lymph vesieles, the globules of the blood seen under different aspects: they are shewn, by the way, to be flattish discs, not globules, and to have a central depression. The elementary vesieles of fat are also figured here. Osseous, horny, cartilaginous particles, are also displayed.

In plate five we have nervous, vascular, and museular elements. The parts of museular fibre are shewn at rest, eontraeted, and loosened into further filaments: the two former conditions are exhibited as seen with a power equal to 540 diameters; the latter with one of 750. Plates six and seven exhibit the skin and its elementary details. Eight and nine, display the tissues connected with the organ of taste. Ten, exhibits miscellaneous textures, among them a vertieal section of the kidney, exquisitely delineated. The eleventh and twelfth plates shew the structures connected with the organ of vision.

But the work requires to be seen and minutely examined, in order to be appreciated according to its merits.

The Works of John Hunter, F.R.S.; *with Notes.* Edited by James F. Palmer. In 4 vols. 8vo. illustrated by a Volume of Plates, in 4to. Vol. I.

"Faber quisque fortunæ suæ," is a maxim which those who have been suceessful in life are generally found willing enough to adopt, as it implies a compliment to their own discretion, and exeludes fortune from any share of their success. The art of rising in life, however, is a compound game, consisting of chance and skill, in whieh chance is often found to over-rule the most consummate skill. "The battle is not always to the strong, nor yet favour to men of skill, but time and ehance happeneth to all." This is more especially true of medical men, who have always received the credit of being fully as dependent on the general affability of their manners and the lucky ineidents of fortune, as on the skill and knowledge which they possess in their profession. For our parts, we see no reason to question the aceuraey of popular belief on this subjeet, or to doubt that the avenues of fortune are as diverse in professional as they are in common life. In most respects, Hunter's entrance on his professional career was commenced under the most favourable auspiees. He had studied under the ablest surgeons of the day, had associated with the most eminent characters of the age, and had aequired a eonsiderable reputation for his anatomical knowledge; and yet the drawbaeks inherent in his own charaeter prevented his reaehing to any great degree of popularity until a late period of his life, and would probably have restrained his flight beyond the vulgar bounds of mediocrity to the end of his days, had those days been a little less short than they were, or the powers of his intellect been a little less vigorous.

"Hunter was, however, destined to

undergo a long trial of those qualities of passive fortitude and active perseverance, of which few situations in life demand a larger share than that of a young man commencing practice in the higher branches of the profession of law or medicine in London; for assuredly it needs no small degree of fortitude to bear up against the disappointment a young man so placed must experience, in finding his merits overlooked, whilst the world is showering wealth on many around him whom he, at least, thinks far less deserving than himself. It requires, too, much steady perseverance, constantly to keep in view the destined goal; resisting the allurements which have so often led men of superior talents to desert the arduous contest, and devote themselves to the pursuits of literature or of science—pursuits which, though delightful, can seldom be extensively followed without the neglect of objects more essential to those who seek for fortune, as well as fame, from the practice of a profession."

It may shrewdly be suspected that most of the events of life are the offspring of circumstances, and gradually grow out of one another. Historians and biographers commit a great error in ascribing the principal revolutions of public and private history to deep-laid schemes of policy; whereas, in truth, the difference in men's fortunes chiefly consists in the sagacity with which they seize, or the aptitude with which they turn to advantage, the common incidents of life. Some there are, indeed, in whose lives there is a sort of "tide, which, taken at the full, leads on to fortune;" but with the generality, life may more aptly be compared to the galaxy or milky way, which consists of clusters of innumerable stars, or to a river which is fed by innumerable small streamlets; the great secret of self-wisdom being to keep a steady eye to one's own advantage, and to turn the least circumstances to account; and, under due restraint, no one can object dishonour to this mode of proceeding, although nothing can be more contemptible than the base shifts to which some men resort, for the purpose of lifting themselves into public notice.

"Hunter had also a great contempt for those minor tactics which constitute so large a part of what has been aptly called the act of rising in the world; and they who have carefully watched the progress of men to fortune, know full well how much of their success has often been due to the judicious management of these auxiliary means. It would be egregious folly to suppose that a man could ever attain to high repute as a surgeon in London, without possessing a large share of the essential requisites for the practice of his profession; but, on the other hand, it requires no great penetration to perceive that the vast difference in the amount of her favours, vouchsafed by Fortune to her different votaries, must be accounted for in some other way than by the amount of professional talent possessed by each. 'He that is only *real*, had need have exceeding great parts of virtue,' says Bacon, 'as the stone had need be rich that is set without foil;' and we need not a better illustration of the truth of this observation than is afforded by Hunter's tardy progress to the path of fortune, compared with the rapid strides of others, who, in professional attainments, would be the first to acknowledge themselves but the humble disciples of this great master.

"But after all, perhaps, the principal reason why Hunter was so long in obtaining a large share of practice, was, that he looked not, as most men do, to the acquisition of fortune, as the end for which he was labouring; but, on the contrary, considered wealth only as a means by which he might advance the far more important objects he had in view. His powerful mind was unceasingly stimulated by an ardent desire to forward the acquisition of those branches of knowledge which, to him, appeared best fitted to promote the improvement of his profession: to this object was devoted every hour that he could spare from his daily avocations, or snatch from the time allotted by others to sleep; and, to promote this end, he was always ready to sacrifice the claims of worldly prudence and self-interest. To witness an interesting and extraordinary case, he would take any trouble, or go almost any distance, without a chance of pecuniary recompence; but to the daily routine of practice he always returned unwillingly, and even when he had acquired a lucrative and extensive business, he valued it only as affording him the means of pursuing his favourite studies. This feeling he would often express to his friend,

Mr. Lynn, when called to see a patient, by saying, as he unwillingly laid by his dissecting instruments, 'Well, Lynn, I must go and earn this d——d guinea, or I shall be sure to want it to-morrow.'"

During the interval which occurred between Hunter's return from the Peninsula and his extensive private engagements in business, he was compelled to eke out his slender fortune by receiving pupils into his house. Most of these attained to considerable eminence in their profession in after life; thus proving the excellence of the instructions which they received under his roof, and the zeal with which his example was able to inspire them. The following just reflections occur on this subject:—

"All of these gentlemen have risen to high reputation in their various stations, and it is not unworthy of remark, that, of the eminent surgeons of which this country has had to boast, by far the greater number have pursued the most important part of their professional education under the roofs, and as the private pupils, of the most able of their predecessors in the art. This may, no doubt, in some cases be accounted for by supposing that the disciple had previously shewn such talent as to lead his friends to seek the best situation for its improvement; but more has been probably due to the stimulus imparted to their energies by the examples before them, and still more to the advantages derived from daily witnessing the best modes of practice, and receiving information on those nicer distinctions in treatment which can never be fully conveyed in lectures, but the knowledge of which forms a distinguishing mark of the accomplished surgeon. Thus we find that most of the surgeons who, in the present day, enjoy the largest share of the public confidence, are, as it were, the direct mental descendants of the men who, a century ago, introduced the first important improvements into modern surgery. Cheselden, Nourse, and Douglas, were then the leaders of our profession; of whom Sharp, Pott, and the Hunters, were the immediate pupils. They, again, became the instructors of Cline, Lynn, Home, Abernethy, Carlisle, Macartney, Sir James Earle, and Cooper; and from them the mantle has descended to a Brodie, a Lawrence, a Green, an Earle, and others, who now occupy, with so much credit to themselves, the places which their great predecessors adorned."

Among Mr. Hunter's pupils, none appears to have won so much on his affections as Dr. Jenner, with whom he ever afterwards maintained a friendly and cordial correspondence. Perhaps no part of Mr. Hunter's history exhibits in so striking a light the untiring ardour with which he prosecuted his physiological pursuits, as this correspondence. As models, indeed, of epistolary composition, we are compelled to say that they are deficient in that ease and fluency which constitute the chief charm of this style of writing, but they every where evince the vigour and originality of his thoughts, while his expressions are often characterized by great terseness and force. We quote a couple of these letters as specimens of the rest.

"Dear Jenner,—I own I was at a loss to account for your silence, and I was sorry at the cause. I can easily conceive how you must feel, for you have two passions to cope with, viz. that of being disappointed in love, and that of being defeated; but both will wear out,—perhaps the first soonest. I own I was glad when I heard you was married to a woman of fortune; but 'let her go, never mind her.'

"I shall employ you with hedgehogs, for I do not know how far I may trust mine. I want you to get a hedgehog in the beginning of winter, and weigh him; put him in your garden, and let him have some leaves, hay, or straw, to cover himself with; which he will do. Then weigh him in the spring, and see what he has lost. Secondly, I want you to kill one in the beginning of winter, to see how fat he is; and another in spring, to see what he has lost of his fat. Thirdly, when the weather is very cold, and about the month of January, I could wish you would make a hole in one of their bellies, and put the thermometer down into the pelvis, and see the height of the mercury; then turn it upwards towards the diaphragm, and observe the heat there. So much at present for hedge-hogs. I beg pardon,—examine the stomach and intestines.

"If Hewson's things go cheap, I will purchase some that I think proper for you; those you mention will, I am

afraid, be every body's money, and go dear.—Ever yours,

"J. Hunter."

(Postmark, Jan. 29, 1789.)

"Dear Jenner,—I wish you joy: it never rains but it pours. Rather than the brat should not be a christian I will stand godfather, for I should be unhappy if the poor little thing should go to the devil because I would not stand godfather. I hope Mrs. Jenner is well, and that you begin to look grave now you are a father.—Yours sincerely,

"J. Hunter."

Besides an Appendix at the end of the Life, containing a chronological list of Mr. Hunter's writings, the author has, in the course of his history, interwoven an account of these various productions, accompanied in most cases with some judicious reflections on their nature and value. The following, on the work on Inflammation, are well deserving of consideration:—

"This work is the one on which, above all his other writings, Hunter's fame has hitherto rested, perhaps too exclusively so, since it has arisen from the circumstance that, with the exception of the Treatise on Syphilis, his other works have been less generally read than they deserve, in consequence of having been published either in an expensive form, or in detached treatises, scattered through the volumes of the Philosophical Transactions, or of the Medical and Chirurgical Society. There are not, however, any of his writings which do not well deserve the attentive perusal of professional men, not only for the information they furnish, but as models of bold and sagacious reasoning; and hence the present edition, which places within the reach of every professional man the whole of his works, heightened, too, in value, by the commentaries of the able men to whose revision they have been severally entrusted, cannot fail to be viewed as a tribute justly due to the merits of Hunter, and as a highly important accession to our medical literature.

The treatise on Inflammation and Gunshot Wounds must be considered as comprising the results of forty years, assiduous attention to the subject, since from his introduction we learn, that the doctrines it unfolds first suggested themselves to his mind at the time he was a student in the London Hospital, and were based on observations collected during that period. These doctrines he continued during his whole professional career to submit to the test of his own increasing experience, and the experience of others, to whom he taught them in his lectures, ever carefully and candidly correcting them where more accurate observations proved them to be faulty, and extending them where fresh information shewed them to be deficient; and having thus brought them to as high a degree of perfection as his abilities and opportunities would permit, he at length submitted them to the test of public opinion in the condensed and systematic form in which we now possess them. Notwithstanding the time and attention he had devoted to the completion of a work on which his future fame was mainly to depend, he was himself fully sensible of its still possessing many defects, and rather desired it to be considered "as a new figure composed from rough materials, in which process little or no assistance could be had from any quarter," than as a perfect work which no farther experience could have amended. It must, indeed, be acknowledged that it does, in many parts, exhibit imperfections of style and diction, as well as repetitions, which not unfrequently obscure the author's meaning; and illogical errors, such as that of confounding proximate and final causes, or employing such imaginary causes as the "stimulus of necessity," "the stimulus of death," "the force of a negative impression," &c., to account for certain effects; phrases which cheat the ear with a seeming explanation, but leave the mind no whit the wiser as to the real causes of the phenomena to be accounted for. These defects, though they do unquestionably detract somewhat from its value, are, however trifling in comparison with the great and varied excellence of this work, which, for the originality and variety of its experiments, the accuracy of its observations, and the importance of its deductions, can with difficulty be paralleled in the whole range of medical literature.

As an instance of the zeal with which Hunter sought and procured every object of curiosity calculated to enrich his museum, the following is sufficiently interesting:—

"The late Dr. Clarke had a preparation of an extra-uterine pregnancy, in which the fœtus had been detained in the fallopian tube, and had there undergone partial development, when the mother died from internal hæmorrhage, consequent on the rupture of the tube. On this specimen he set a high value, and Hunter had often viewed it with longing eyes. "Come, Doctor," said he, "I positively must have that preparation." "No, John Hunter," was the reply, "you positively shall not." "You will not give it me, then?" "No." "Will you sell it?" "No." "Well, then, take care I don't meet you with it in some dark lane at night, for if I do, I'll murder you to get it."

We pass over Sir Everard Home's atrocious conduct in burning the Hunterian MSS. with this single observation, that as the Venetians have placed a black tablet in the place of the portrait of their traitor doge, so a black tablet in the Hunterian Museum would be a fitter record of Sir Everard Home's baseness than the bust which at present stands in the hall of the College. "O tempora! ô mores! Senatus hæc intelligit, consul videt: hic tamen vixit; vixit? imò verò etiam in senatum venit."

We conclude with the following extract, which contains a hint which we hope to see acted upon before many more years have elapsed.

"It may be thought that the author of the Hunterian Museum needs no other memorial of his worth than the proud one he has himself erected; nor does he, to perpetuate his fame: still, it would be a fitting act of respect to his memory, from those who enjoy the benefits of this rich legacy of his genius, to enrol his name amongst those of the other gifted men whose worth stands recorded in Westminster Abbey."

DESGENETTES.

When the French were at Moscow, the Emperor gave an order to have the Foundling Hospital converted into a barrack; but Desgenettes, as bold in Russia as formerly in Syria, told him to take care how he allowed posterity to compare him with Herod. "Herod!" said Napoleon, "what resemblance is there between me and Herod; what do you allude to?"—"To the massacre of the innocents!" replied Desgenettes. The order for the barrack was countermanded.—*Bouillaud's éloge.*

MEDICAL GAZETTE.

Saturday, February 25, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL ATTENDANCE ON PAUPERS UNDER THE POOR-LAW.

We make no apology for once more calling the attention of our readers to this important subject. Notices of motions have been given in Parliament for committees to inquire both into the general and medical working of the amended Poor-Law, and every man who possesses a spark of national feeling ought to take an active interest in the result.

Medical men are more especially implicated in the consequences; for if the Poor-Law be allowed to continue in its present state, it must entail permanent disgrace and degradation on the profession.

Three things are loudly complained of by those practitioners in the provinces who have the best opportunity of observing the operation of the Union system; these are, first, the utter insufficiency of medical attendance on the pauper population; next, the miserably wretched remuneration which the district medical officers (or slaves rather) are obliged to accept; and, lastly, the perpetual insults and indignities cast upon the members of the profession by the Poor-Law functionaries—who no doubt calculate that if they can only lower medical practitioners in the public estimation, they can then accomplish their purposes of thrift and meanness with perfect certainty of success.

These are no vague and groundless assertions; they are facts proved over and over again in the pages of this journal, but not the less worthy of repetition for that reason. Medical men

often require to have their memory jogged, and to have the same truths reiterated occasionally before the requisite impression is made. At the present moment every medical man should be broad awake; and not only individuals of the profession, but the corporate bodies, should be up and stirring, if the character of the healing art be in any way dear to them.

The active Committee of the Provincial Association have just put forth a second edition of their valuable report*; to that summary of the state of the case between the Poor-law and the medical profession, we strongly recommend at this juncture the attention of the Colleges, the Hall, and every individual practitioner; even the most cursory perusal of its contents must convince the reader how deeply the interests of medicine are involved in the proper adjustment of the question.

On a former occasion we noticed the body of the Report, and made some extracts from it; we have not much space at our command just now, or we should be tempted to select some more, especially from the fresh matter incorporated with the new edition. There are a few passages, however, for which we must make room, as they shew in a striking manner the difficulties in which many of our unhappy brethren in the provinces are placed under the existing *régime*.

For those who are trammelled in the new arrangements to speak out, or to complain in any manner of their grievances, were as much as their frail tenures are worth; it would be deemed a sort of high treason to the Somerset House authorities, and, if discovered, would be summarily dealt with. The following letter sent to the Committee will serve to show how even medical men not immediately connected with the Unions are situated:—

"Though the statement I gave you, dated October 23rd, is decidedly correct, and I could undertake to prove it in every particular, yet, situated as I am at the present time, it might be extremely injurious to me if I allowed that statement to be published, knowing that it came from me. In the first place, the Vice-chairman of the union is a most excellent patient of mine, and thinks very highly of the New Act, *and perhaps that statement might displease him;* if it did, the mischief might not end there; *he could influence others.* Again, would not that statement be a libel on the district medical man, and therefore actionable, so that I might be dragged into law proceedings. I can have no objection to the statement being published, if neither name nor place be mentioned. I have every wish to render the Committee all the information I possibly can, but having a family to provide for, and entirely dependent on my exertions, *I do not think I ought to risk any thing.*

"I feel equally with the Committee, the DEGRADATION brought on the profession by the Poor Law Commissioners, and nothing would give me greater pleasure than to assist my medical brethren, in any way I can, to extricate us from it.—I am, &c. &c.

"Dec. 13, 1836."

At the conclusion of the present article we shall give a similar letter just received by ourselves, in which the working of the same degrading influences will be recognized.

We have alluded to the insufficiency of the medical aid provided for wretched paupers in the keeping of the Commissioners. Who can read the following facts without being convinced of the mischievous tendency of their present arrangements.

"In the Cookham and Bray unions, *two* medical men were appointed under the new system, in place of *seven* who previously attended.—In the Newbury union, consisting of *eighteen* parishes,

* The Report of the Poor Law Committee appointed by the Provincial Medical and Surgical Association. Read at the Anniversary Meeting, held at Manchester, July 1836. Second Edition, with an Appendix, containing Selections from the Evidence furnished from numerous Parochial Unions, respecting the Medical Arrangements and their Effects.

one individual undertook the duties formerly performed by *twelve;* he had no assistant, and had a space to ride over measuring sixteen miles by ten.—In the Bampton district of the Witney union, *ten* miles in diameter, *eight* medical men were formerly employed; now only *one*.—In one of the districts of the Aylesbury union, the surgeon resides at a distance of *seven* miles from one part of the district, where medical assistance might be obtained within *two* miles.—In another district of the same union, the nearest point to the surgeon's residence is *seven* miles, and the most remote *twelve*. Under the old system *sixteen* medical men were employed for the parishes of this union, containing forty parishes and four districts; under the new system *three* medical men only, one of whom was likewise appointed to an extensive district in another union.—In the Wheatenhurst union, comprehending *fourteen* parishes, and necessarily much travelling, the Commissioners induced the Guardians to waive a contract with the established practitioners, and to engage *one* young man from the schools, who had neither a horse nor instruments.—In the Faversham union, including twenty-five parishes, only *one* medical man was employed.—Numerous cases of a similar kind could be adduced."

As to the proofs of the degradation suffered by practitioners who have the misfortune to be connected with the existing Poor-law unions, they abound in the Report. The subjoined passages are among the conclusions on the subject drawn by the Committee:—

"Medical officers are liable, in the discharge of their duty, to receive a summons from the Board of Guardians on occasion of any supposed neglect; they are thus subject to be reprimanded by persons who cannot be supposed capable of judging correctly as to the due performance of medical duties. Your Committee have received information of several oppressive proceedings of Guardians in this respect.

"Again, if a medical opinion is considered necessary to guide the Board in any of its deliberations, which not unfrequently occurs, the medical officer is *summoned* to attend in the same manner as are the inferior officers of the Board.

"Lastly, those medical men who have presumed to express an opinion unfavourable to the new medical arrangements, have frequently been marked for oppression by the authorities, and some have even been induced to withdraw or withhold their names from petitions to parliament against the system, from apprehension of injurious consequences to themselves."

The meanness of the Commissioners in taunting medical men with accepting (what in many instances they cannot help) appointments by *tender*, when they themselves arbitrarily dictate this as the sole mode of obtaining an appointment in certain localities, is well exposed by the Committee. The Commissioners say, "We may be sure that the medical practitioner will, in fixing upon his terms, do nothing which he considers will not, on the whole, be advantageous to his own profession;" thus endeavouring to cast solely on the medical officers of Unions the discredit of the miserably low stipends awarded to them. But, say the Committee, with excellent good temper and pointed shrewdness,—"We have only to reply, that were the system of *tender* introduced into any other profession, the same injurious results would ensue; if *even the office of the Poor-Law Commissioner* were to be submitted to the same degradation, there would be found needy speculators, not destitute of ability, who would gladly, for the tenth part of the salary, undertake its duties."

We intended to have noticed some of the facts in the Appendix, but find we have only room to give the letter we promised.

To the Editor of the Medical Gazette.

Sir,

The following very singular and offensive note was received, a few days ago, by a respectable practitioner in

this neighbourhood from a relieving officer:—

"Sir,—You are requested to attend to the ease of S. G. *immediately*, who is said to be in a state of mental derangement. You are also requested to call on the overseer (*i. e.*) Mr. M., and report the ease to him, that he may report the same to-morrow at the Board at C——. *(Fail not at your peril.)*

"W. C., Relieving Offieer."

It was sent to me as affording an additional proof of the degradation to which the profession are subjected under the operation of the present abominable system. If you think its publieation will operate as a wholesome lesson to those members of the profession who are so anxious to fill the *highly respectable* (?) offiee of medieal officer under a Board of Guardians, as to tender their serviees for a wretched pittance, you will oblige me by giving it insertion.

As the case is also an admirable specimen of the medieal merits of this wonder-working system, I cannot forbear mentioning it.

A poor widow, æt. 47, whilst washing in the house of the *overseer* of her own parish, is taken ill on the Monday; she gets worse on Tuesday and Wednesday; is in a state of violent derangement on Thursday (no doubt arising from active disease within the head); persons are employed by the overseer to take eare of her both day and night, and yet, sir, she was allowed to remain without medieal assistanee until the following Monday, *one week* after the eommencement of this serious attack, when a humane gentleman in the neighbourhood, hearing of the ease, sent a surgeon to attend her at his own expense. On the following day (Tuesday) the relieving officer pays his *weekly* visit to the parish, and by way of making up for the previous negleet, sends the above-mentioned insolent note to the medical officer, who in duty bound immediately attends, and on his arrival finds the poor woman already under the eare of another praetitioner as a private patient, by whom she had been bled, leeched, blistered, head shaved, and physieked! She has sinee died.

It is but justiee, however, to the Board of Guardians, to state, that when the case was brought before their notice, they reprimanded their officer, and passed a resolution unanimously declaring their disapprobation of his conduct.—I am, sir,

Your most obedient servant,

A Constant Reader.

Cerne, Feb. 20, 1837.

P. S. I send you my name in confidence, as I do not think any eommunication of this sort should be sent without it, but I do not wish it to appear in public.

ROYAL INSTITUTION.

Friday, Feb. 17, 1837.

Dr. Marshall Hall's Reflex Action of the Spinal Marrow.

Dr. Faraday undertook this evening to give a popular exposition of Dr. Hall's views on the "reflex function," and effected it with brilliant success. He apologized for meddling with a subject so strictly physiological and out of his province; but it was one of the objects of these evening meetings to bring even the most abstruse topics familiarly before the members of the Institution and their friends. After pointing out the functions of the brain, and showing, in accordance with Dr. Hall's theory, that the brain is the sole seat of sensation, he passed to the consideration of the spinal cord and its reflex action. It would be superfluous in this journal, in which Dr. Hall's views have so often been stated, to repeat the account given of them by Dr. Faraday, of which not its novelty but its total freedom from technicalities was the principal charm. Dr. Hall's experiments on the turtle, the snake, the frog, the stunned horse, &c., were described; and diagrams were exhibited which were well adapted to give a general idea of the subject to a popular audience.

The views of other writers corroborative of those of Dr. Hall were alluded to. Mr. Mayo's distinct notice, in a book of his published in 1823, of the identical function of the spinal marrow, so fully afterwards developed by Dr. Hall, was quoted; and Dr. John Müller's opinions, as given in his Physiology, were stated to be strongly confirmatory of the same doctrine.

By the way, we have before us an extract from Müller's account of the reflex function, recently published by Dr. Hall, with remarks; we cannot, perhaps, do better than close this brief account of a very interesting evening with the summary given by Dr. H. of those points in which he differs, to a certain extent, from Professor Müller:—

1. I view the reflex function as the *distinct* and *peculiar* or *proper* function of the medulla spinalis, equally independent of the brain, the sympathetic, and of the anastomoses and the mere origins of nerves;

2. I regard this function as residing in the medulla, as the *axis* of a *distinct* system of *excitor* and *motor*, and *excito motory* nerves;

3. I consider this function and its system of nerves as presiding over the *orifices* and the *exits* or *sphincters* of the animal frame, and over *ingestion* and *egestion;*

4. The brain is the central organ of sensation and volition, the organ of *mental* relation with the external world; the spinal marrow, on the contrary, is the central organ of excito-motory phenomena, and of the *physical* appropriation of certain external objects;

5. Respiration even is a part of this peculiar function: it is *excited* on ordinary, and on extraordinary occasions, through appropriate excitor nerves, especially the pneumo-gastric, but also the fifth and spinal nerves;

6. *Volition* may *modify* the acts of the reflex function, and these acts may be attended by sensation; but this function is, otherwise, independent both of volition and sensation, of their organ the brain, and of the mind or soul;

7. The *passions*, in an especial manner, demonstrate themselves through the medium of the true spinal marrow; and thus *pain* may induce surprise or fear, and *appear* to occasion excito-motory act;

8. The brain *sleeps;* but the spinal marrow *never sleeps;*

9. Finally, the excito-motory system of nerves are the peculiar seat of action of certain *diseases*, and of certain *causes* and *remedies* of disease.

AD CAPTANDUM SURGERY.

A FONDNESS for certain operations, and a degree of over-zeal in seeking for occasions to perform them, are modern traits of professional character, which, it is to be hoped, will become obliterated or obscured by the daily improvements in pathology and the diagnosis of diseases. The mere operator ought not to be ranked amongst the best of surgeons, and the kidnapping of such patients as furnish conspicuous cases for an hospital-theatre, or for the more private assembly of a *coterie* of young operators, should be discountenanced and denounced by every conscientious cultivator of surgical science.—*Mr. Crosse's Retrospective Address.*

HOSPICE DE LA MATERNITÉ, ARRAS.

CÆSAREAN OPERATION SUCCESSFULLY PERFORMED, WITH SAFETY BOTH TO THE MOTHER AND CHILD.

By A. R. DUCHATEAU, M.D.

Surgeon in Chief to the Hospitals of Arras, Professor in the School of Medicine, &c.

STEPHANIE BRASSART, aged 22, is a native of Arras. Her parents were both well formed; her height is forty-three inches; her general aspect that of a ricketty person. The vertebral column is very convex anteriorly; the thighs are short, and the legs much curved. General health good on entering the hospital.

We learned that the catamenia had made their first appearance when she was 18 years of age, and had continued abundant and regular since. The first time I saw her at the Maternité, whither she came in order to be let blood, in the eighth month of her first pregnancy, I was struck with her figure, and thought it requisite to make some inquiry as to the state of the pelvis. Mde. Delarue and I instituted an examination accordingly, and found that the crests of the ilia were in one line, and that from one anterior superior spinous process to the other measured 8 inches 9 lines; also that the sacro-vertebral angle was directed towards the pubes, and a little to the right, and that the upper strait was but two inches in its antero-posterior diameter.

On the 20th of April, 1836, Stephanie returned to the hospital, being at her full time; she complained of pains about the loins. No regular labour-pains, however, occurred till five in the morning of the 24th, when they came on decidedly but slowly. At six, the os uteri might be felt turned to the right and forward, with a dilatation of from 10 to 12 lines. The membranes now began to present, but no part of the child could be reached in any way by the finger. A lavement was administered, and the patient put into a bath.

A meeting of my colleagues was summoned, and assembled at nine A.M., when all were satisfied that the Cæsarean operation was indispensable. The patient was taken, without loss of time, into the operating theatre, and there, in presence of the civil and military *officiers de santé* of the hospital, Mde. Delarue, and our pupils

of the Maternité, and upwards of sixty pupils belonging to the school, I had Stephanie placed on a hair mattress, with her body horizontal, her head slightly raised, and her lower extremities a little apart—the feet being on the margins of the bed. My four assistants being duly appointed to their several posts, I took up my position on the left of the patient, when I commenced by making an incision on the abdomen, extending from two inches above the pubes, along the linea alba, a little to the left, avoiding the umbilicus, to two and a half inches above the navel. In completing this incision, the several aponeurotic expansions were laid bare. The peritoneum was at length arrived at, when it was opened with great caution by means of a straight and buttoned bistoury, along the whole length of the original incision. I then raised the omentum which covered the uterus and intestines; an assistant kept it raised; upon which the uterus was found having its centre in the middle of the incision of the abdomen. I cut into it with a slightly convex bistoury, when the fibres of the womb were observed separating from each other as fast as they were divided. As soon as I reached the interior surface, I found by the jet of black blood which immediately took place, that I had cut down on the placenta. The opening was forthwith dilated with a buttoned bistoury; the membranes were then seen, upon which I opened them cautiously, the assistants taking care that the liquor amnii should not be effused into the cavity of the abdomen. The infant was in the first position for delivery; I withdrew it by the legs, supporting the trunk with the left hand; it cried presently, and the funis was divided. Mde. Delarue took charge of the child; it was a boy, and weighed 6 lb 4 oz.

We then waited for three minutes, when finding the uterus contracting, I detached the placenta, and removed it along with the membranes; nor were there any clots of effused fluid left in the viscus. I put my forefinger through the os tincæ from within, and met the finger of one of my assistants from without: we were thus satisfied that there was no mechanical obstacle to the lochia, should they occur; we also ascertained that the structure of the promontory was such as we judged it to be when we determined on the operation.

The borders of the abdominal incision were brought together with three points of suture. A seton covered with cerate was placed at the lower angle of the wound; five pieces of sticking-plaster were placed between the sutures; a compress was laid over this; and charpie, with a general bandage methodically applied, completed the process of dressing.

The operation lasted altogether about twenty minutes. No artery that required tying was divided. The patient during the whole of the time displayed much fortitude and resignation. After the operation she was removed to another bed on the same floor, where she was placed in a horizontal position and left to repose, after getting a sedative draught.

About three hours after the operation acute pains were felt in the right iliac region, which required the application of fifteen leeches. This had a good effect. Vomiting and feverish symptoms during the afternoon. On the second day, the vomiting continuing, with much disturbance of the system, the dressing was removed, when a portion of the omentum was found protruding at the upper angle of the wound; it was returned into the abdomen, and secured there by adhesive plaster laid above its place of egress. A large poultice was applied to the abdomen, which alleviated the vomiting and pain.

Third day.—The lochia are established; the disturbance of the system much abated; the bowels largely moved. Poultice renewed. The symptoms were variable during the succeeding days, but not alarming at any time.

Ninth day. — Total absence of fever; wishes for *café au lait*, which is given her. Sutures and seton removed. Union of a great part of the wound; a little pus, however, flows from the lower angle on the accession of cough. The poultice still applied daily.

From the tenth to the twenty-first day, when the cure was complete, the dietary regimen was gradually improved; all the functions were naturally performed. An appearance of œdema was noticed about the fifteenth day, but was remedied by medicinal treatment. After this Stephanie began to leave her bed, and to walk about the wards, and in the garden of the hospital. She did not return home till sixty-three days after the operation, having waited, indeed, to be present at the distribution of prizes which took place at the Maternité on the 25th June.

The child is well; it has been sent out to nurse at the charge of the administration of hospitals, the mother having had no secretion of milk*.

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* La Presse Médicale, ancien Journal Hebdomadaire; Jan. 1837.

LIST OF DRUGS,

ON SALE IN THE ENGLISH MARKET,

With their Prices and several Duties.

(From the Official Returns up to Tuesday, Feb. 21, 1837.)

	Price.			Duty.		Duty Paid	
						In 1837 to last week.	Same time last year.
	£ s. d.	to £ s. d.		s. d.			
Aloes, Barbadoes, D.P. c	12 0 0	to 30 0 0	B P. lb	0 2	18,253	13,643	
Hepatic (dry) BD..... c	5 0 0	14 0 0	F. lb	0 8			
Cape, BD. c	1 10 0	1 16 0					
Aniseed, Oil of, German, D.P.... lb	0 9 0	0 9 6	F. lb	1 4	—	—	
E. I. ..... lb	0 7 0	0 7 6	E. I.	1 4	129	31	
Assafœtida, B.D. c	0 2 10	0 5 0	c	6 0	—	4	
Balsam, Canada, D.P. ..... lb	0 1 3	0 1 4	lb	0 1	—	226	
Copaiba, BD. ..... lb	0 2 7	—	c	4 0	16	54	
Peru, BD. ..... lb	0 5 0	—	lb	1 0	142	589	
Benzoin (best) BD..... c	25 0 0	50 0 0	c	4 0	3	21	
Camphor, unrefined, BD..... c	9 0 0	—	c	1 0	63	57	
Cantharides, D.P. ..... lb	0 6 6	—	lb	1 0	3,514	4,105	
Carraway, Oil of, D.P. ..... lb	0 9 0	—	lb	4 0	291	225	
Cascarilla or Eleutheria Bark, D.P.C.	1 15 0	—	lb	0 1	1,836	3,168	
Cassia, Oil of, BD..... lb	0 9 0	—	lb	1 4	669	952	
Castor Oil, East India, BD ..... lb	0 0 6	0 0 10	c	1 3	1104	924	
West I. (bottle) D.P. 1½ lb	0 2 3	—		—			
Castoreum, American ..... lb	1 15 0	—	lb	0 6	147	610	
D.P. Hudson's Bay ..... lb	1 0 0	1 4 0					
Russian..... lb	none						
Catechu, BD. c	1 0 0	—	c	1 0	8,495	2,127	
Cinchona Bark, Pale (Crown)..... lb	0 2 0	0 3 6	lb	0 1	38,495	16,788	
BD. Red ..... lb	0 3 0	0 6 0					
Yellow ..... lb	0 1 6	—					
Colocynth, Turkey ..... lb	0 2 6	0 4 0	lb	0 2	1,694	5,883	
D.P. Mogadore ..... lb	0 3 0	—					
Calumba Root, BD. c	1 4 0	2 5 0	lb	0 2	4,898	4,694	
Cubebs, BD. c	3 0 0	—	lb	0 6	6,889	4,875	
Gamboge, BD. c	5 0 0	15 0 0	c	4 0	33	19	
Gentian, D.P. c	1 4 0	—	c	4 0	65	70	
Guaiacum, D.P..... lb	0 1 0	0 1 8	c	6 0	16	—	
Gum Arabic, Turkey, fine, D.P... c	8 0 0	9 0 0					
Do. seconds, D.P. .. c	5 0 0	7 0 0	c	6 0	784	2,123	
Barbary, brown, BD. c	3 19 0	—					
Do. white, D.P..... c	4 15 0	—					
E. I. fine yellow, BD. c	3 0 0	3 10 0	c	6 0	437	300	
Do. dark brown, B.D. c	1 15 0	2 5 0					
—— Senegal garblings, D.P. c	4 15 0	5 0 0	c	6 0	69	84	
—— Tragacanth, D.P. c	13 0 0	20 0 0	c	6 0	42	10	
Iceland Moss (Lichen), D.P. .... lb	0 0 2½	0 0 3	lb	0 1	810	774	
Ipecacuanha Root, B.D. ..... lb	0 3 0	—	lb	1 0	2,398	1,498	
Jalap, BD. ..... lb	0 1 10	—	lb	0 6	6,713	6,956	
Manna, flaky, BD. ..... lb	0 5 0	—	lb	0 3	7,754	4,701	
Sicilian, BD. ..... lb	0 1 7	—					
Musk, China, BD. ..... oz	1 0 0	1 8 0	oz	6 0	335	418	
Myrrh, East India, BD. c	5 0 0	14 0 0	c	6 0	10	—	
Turkey, BD..... c	2 0 0	11 10 0					
Nux Vomica, BD..... lb	0 8 0	0 9 0	lb	2 6	—	—	
Opium, Turkey, BD. ..... lb	0 15 0	0 16 0	lb	1 0	5,184	7,947	
Peppermint, Oil of, F. BD..... lb	1 0 0	—	lb	4 0	129	148	
Quicksilver, BD. ..... lb	0 3 8	—	lb	0 1	39,829	41,644	
Rhubarb, East India, BD..... lb	0 2 0	0 3 6	lb	1 0	5,503	4,600	
Dutch, trimmed, D.P. lb	0 3 6	0 4 6	F. lb	1 0	1,936	1,035	
Russian, BD. ..... lb	0 8 3	—					
Saffron, French, BD. ..... lb	1 1 0	—	lb	1 0	1,243	1,393	
Spanish ..... lb	1 1 0	—					
Sarsaparilla, Honduras, BD..... lb	0 1 0	0 1 9	lb	0 6	13,406	17,555	
Lisbon, BD. ..... lb	0 2 0	—					
Scammony, Smyrna, D.P..... lb	—	—					
Aleppo ..... lb	0 12 0	0 15 0	lb	2 6	1,791	2,448	
Senna, East India, BD. ..... lb	0 0 3	0 0 4	E.I. lb	0 6	15,137	10,754	
Alexandria, D.P..... lb	0 1 6	—					
Smyrna, D.P. ..... lb	0 1 0	0 1 3	Other sorts	0 6	14,754	10,578	
Tripoli, D.P. ..... lb	0 1 0	0 1 3					

‡§‡ BD. In Bond.—c. Cwt.—B. P. British Possessions.—F. Foreign.—D. P. Duty paid.

NOTE FROM MR. FERRIER,
OF YARMOUTH.

To the Editor of the Medical Gazette.

SIR,

HAVING made your journal the medium of circulation for the railings of Mr. Aldred, of this place, against myself, an individual of whom you can have no knowledge *, I claim so much of editorial courtesy from you as will prompt you to insert this my reply, with which I should have troubled you before, had I not been much and severely occupied of late.

In answer to your comments, and Mr. A.'s letter, I beg to say, I am the correspondent of no individual journal, and feel myself at liberty to reply to the application of one journalist without becoming the object of unmerited abuse from another. I beg to reiterate my former statement, and at the same time I unhesitatingly place my character for veracity (which no abuse of Mr. A.'s can injure or destroy) upon the truth of every word thereof; and, in furtherance and proof of such statement, I beg to refer to the clerk of the peace, the clerk to the magistrates, and the officers in court, who were present at both the inquest and the previous interview with Mr. A. to which I alluded.

Were the circulation of your journal confined merely to the locality in which your original correspondent and myself reside, I would not thus trouble you.

I am, sir,
Your obedient servant,
WM. S. FERRIER,
Coroner of Great Yarmouth, and Senior Surgeon to the Dispensary.

Great Yarmouth, Norfolk,
Feb. 20, 1837.

DESGENETTES.

IT was in his tent at Acre, that Bonaparte suggested to Desgenettes the propriety of despatching his plague patients with opium: nor did the noble refusal of the latter turn the general from his purpose; he soon found others more compliant. "On our return to Jaffa," says Desgenettes, "I found that laudanum, in a strong dose, had been administered to about five-and-twenty or thirty of the sick. Some of them vomited it, were relieved, recovered, and then told what happened."

LITERARY ANNOUNCEMENT.

Preparing for publication on or before the 1st of October, EXPERIMENTAL PHYSIOLOGY; founded on *Lund's Physiologische Resultate der Vivisectionen neuerer Zeit*; with considerable additions. By R. B. Todd, M.D. Professor of Physiology in King's College.

* Mr. Ferrier will excuse us. Who does not know the Medical Coroner of Yarmouth? Mr. Aldred's letter, by the way, was published on the 10th of last December.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 21, 1837.

Abscess	1	Hæmorrhage	1
Age and Debility	53	Heart, diseased	3
Apoplexy	8	Hooping Cough	9
Asthma	34	Inflammation	28
Cancer	1	Bowels & Stomach	7
Childbirth	4	Lungs and Pleura	15
Consumption	63	Influenza	20
Convulsions	33	Jaundice	1
Croup	4	Liver, diseased	4
Dentition or Teething	4	Measles	2
Dropsy	11	Mortification	1
Dropsy in the Brain	7	Scrofula	1
Dysentery	1	Small-pox	1
Epilepsy	1	Stone & Gravel	1
Erysipelas	1	Unknown Causes	9
Fever	12		
Fever, Scarlet	1	Casualties	5
Fever, Typhus	3		

Decrease of Burials, as compared with the preceding week . . 208

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

Feb. 1837.	THERMOMETER.		BAROMETER.	
Thursday . 16	from 41	to 55	30·01	to 30·01
Friday . . 17	36	50	30·13	30·18
Saturday . 18	27	49	29 98	29 57
Sunday . . 19	28	51	29·68	29 19
Monday . . 20	34	45	29·38	29·68
Tuesday . . 21	39	50	29·47	29·62
Wednesday 22	32	45	29·75	29·90

Winds W. and S.W.

Except the 20th and 22d, generally cloudy, with frequent and heavy showers of rain.

Rain fallen, 1 inch and ·1 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

The letter from the BRITISH MEDICAL ASSOCIATION, sent through their Secretary, is unsuited for our columns; we shall publish it *extra-limites*, if the parties please, or it may go on our wrapper as an advertisement. But no doubt Mr. Wakley, their patron, will be delighted to publish it for them; or Dr. Ryan, who "entreats the well-wishes of the British *Radical* Association." (See his No. for Feb. 11th.)

MR. SANDALL'S article on *Spillan's Translation* of the Pharmacopœia is inadmissible: were it on the Pharmacopœia itself, we might be induced to give it insertion.

WILSON & SON, Printers, 57, Skinner-St. London

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 4, 1837.

LECTURES

ON

MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LVIII.

In my last lecture I commenced the examination of the family Menispermaceæ, and noticed the Cocculus palmatus, which yields us Calumba root. I shall in the next place examine

Cocculus suberosus.

History. — According to Sprengel, the fruit now usually called *Cocculus indicus* was introduced by the Arabians, and was described by Avicenna and Serapion under the name of *Maheradsch.* It is sometimes termed the *Levant nut*, or *bacca orientalis.*

Botanical history.—The plant yielding it is a native of Malabar, and is called, by Linnæus, Menispermum Cocculus, by Wight and Arnott, Anamirta Cocculus, and by Decandolle, Cocculus suberosus. It is a diœcious, perennial, twining plant, with a corky cortex, leaves cordate, truncated at the base, firm and lucid. The inflorescence is a many-flowered panicle. The plant belongs to class *Diœcia*, order *Hexandria*, in the Linnæan arrangement.

The fruit is by some called a berry, by others a drupe. It is reniform, purplish red, and fleshy.

Physical characters.—As met with in commerce, Cocculus indicus is rather larger than a pea, rounded, or slightly reniform. It consists externally of a dried, thin, blackish brown, rugous, acrid and bitter layer, which envelopes a thin, bivalved, white, ligneous shell. If the fruit be regarded as a drupe, the shell will be formed of the endocarp, and no seed coats will be recognizable: whereas, if the fruit be considered as a one-seeded berry, the shell must consist of two altered seed coats. In the middle of this shell arises a central placenta, which is contracted at its base, but enlarged and divided into two cells superiorly. Between this placenta and the shell is an oleaginous, yellowish, very bitter nucleus, of a semilunar form. This nucleus never wholly fills the cavity of the shell,—at least in the Cocculus indicus of commerce; for by keeping it gradually becomes atrophied, and in old samples it is not uncommon to find the shell almost empty. This change is observed also in other oleaginous seeds.

Chemical composition.—Iodine colours the nucleus brown. The cold watery infusion of the whole fruit is slightly acid, and produces a dark grey precipitate with chloride of iron. Infusion of galls feebly precipitates it.

Boullay made an analysis of Cocculus indicus in 1812, and in the year 1834, another analysis was made by MM. Pelletier and Couerbe.

1. *Analysis of the nucleus.*—The following are the substances recognised by MM. Pelletier and Couerbe in the nucleus of cocculus indicus.

1. Picrotoxine.
2. Resin.
3. Gum.
4. A fatty acid substance.
5. An odorous matter
6. Malic acid.
7. Mucus.
8. Stareh.
9. Lignin.
10. Malate of lime.
11. Inorganic salts (nitrate and sulphate of potassa, and chloride of potassium) by incineration yield carbonates of potash, and of lime, manganese and iron.

2. *Analysis of the envelope of the nucleus*

(*pericarp*).—The following substances were found by the same chemists in the covering of the nucleus.

1. Menispermine.
2. Paramenispermine.
3. Yellow alkaline matter.
4. Hypopicrotoxic acid.
5. Wax.
6. Starch.
7. Chlorophylle.
8. Resinous matter.
9. Gum.

Several of the above-mentioned substances have not hitherto been detected in any other plants, and therefore will require a brief notice.

Picrotoxine.—This is a white, crystalline, intensely bitter substance, soluble in 150 parts of water at 57° F., in 25 parts of boiling water, in a third of its weight of alcohol, and in less than half its weight of æther. It is insoluble in the fixed and volatile oils; but it is soluble in acetic acid. It does not combine with acids, but forms combinations with alkalies. It seems, therefore, to be an acid, though a feeble one. It is composed of—

Carbon	60·96, or 12 atoms	= 72·00
Hydrogen	5·80, or 7 atoms	= 7·00
Oxygen	33·24, or 5 atoms	= 40·00
	100·00	119·00

The poisonous effects of the nucleus depend on the picrotoxine.

Menispermine.—This is an opaque, white, crystalline substance, soluble in alcohol and æther, but insoluble in water. It fuses at 248° F., and at a higher temperature is decomposed, leaving an abundant charcoal. It dissolves in, and saturates acids; and from these solutions alkalies precipitate it. Concentrated sulphuric acid has little action on it: hot nitric acid converts it into a yellow resinous substance, and oxalic acid. It is composed, according to Gay-Lussac, of—

Carbon	71·80, or 18 atoms	= 108
Hydrogen	8·01, or 12 atoms	= 12
Nitrogen	9·57, or 1 atom	= 14
Oxygen	10·53, or 2 atoms	= 16
	99·91	150

It does not appear to have any marked action on the animal economy.

Paramenispermine.—This is a crystalline solid, insoluble in water, scarcely soluble in æther, but dissolving readily in alcohol. It is volatile, and may be sublimed unchanged. It does not saturate acids, and, therefore, differs in this respect from the preceding substance. Notwithstanding this, however, its composition is the same: hence menispermine and paramenispermine are isomeric substances.

Hypopicrotoxic acid.—This acid is an amorphous solid, insoluble in water (cold or boiling), insoluble in æther, soluble in alkalies, and precipitable from its solution in them by the mineral acids. It is composed of—

Carbon	64·14
Hydrogen	6 09
Oxygen	29·17
	99·40

This composition differs but little from that of picrotoxine.

Physiological effects.—(*a.*) *On vegetables.* A solution of the aqueous extract of Cocculus indicus killed a haricot plant in twenty-four hours.

(*b.*) *On animals generally.* It is poisonous to all animals: at least it has been found to be poisonous to dogs, goats, cows, crocodiles, birds, and insects. Goupil considered it to be a local irritant; but the correctness of this opinion is denied by Orfila. When introduced into the stomach, its irritant effects were confined to the production of nausea and vomiting. It acts on the cerebro-spinal system, causing staggering, trembling, tetanic convulsions, and insensibility. Goupil states, all fish who eat it die,—roach being killed very easily, barbel with more difficulty. "The barbel," we are told, "is, of all fish, that whose flesh the most frequently occasions accidents in those animals who eat it, probably because these fish, taking a longer time to die, the poison is longer subjected to the action of the digestive juices, and a considerable quantity of it is consequently absorbed." Orfila says Cocculus indicus acts like camphor on the nervous system, and principally on the brain.

(*c.*) *On man.* Its effects on man have not been accurately ascertained. Hill says three or four grains of it have brought on nauseas and faintings. It is frequently added to malt liquors, for the purpose of increasing their intoxicating powers; but from some accounts which I have received, from an Excise officer, of the effects of beer thus adulterated, the action appeared to be rather on the voluntary muscles than on the intellectual powers.

The operation of *Picrotoxine* is analogous to, though stronger than, that of Cocculus indicus. Ten or twelve grains, given by the mouth, are sufficient to kill a dog. A grain and a half, injected into the jugular vein of a dog, killed the animal in twenty minutes.

Uses.—Cocculus indicus is rarely employed in medicine. It has, however, been used as an external application, in the form of powder or ointment, to destroy parasitic animals, (hence the Germans call these berries *Läusekorner*—that is, *Louse*

grains), and in some skin diseases, as porrigo.

Notwithstanding the severe prohibitory statutes against the employment of Cocculus indicus in brewing, the officer just alluded to, assures me he has frequently discovered this poison in beer, and has fined the parties for using it. It is, however, now commonly employed in the form of powder or solution, and is not so readily recognized. He also referred me to Morrice's "*Treatise on Brewing*," which has passed through many editions (a proof of its extensive sale), and in which are given full directions for the employment of this drug. In the manufacture of porter, this author directs 3lbs. of Cocculus indicus to be added to every 10 quarters of malt. "It gives," says this rascal, "an inebriating quality, which passes for strength of liquor;" and he also says it prevents "second fermentation in bottled beer, and consequently the bursting of the bottles in warm climates."

Administration.—The ointment of Cocculus indicus is prepared with one part of the powdered berries to two parts lard. Jäger has employed in the same cases an ointment composed of ten grains of picrotoxia to an ounce of lard.

Antidote.— In a case of poisoning by either Cocculus indicus or picrotoxine, the first object is to expel the poison from the stomach; and for this purpose we should administer emetics.

No antidote is known, though acetic acid appeared to Boullay to diminish the effect of picrotoxine.

Cissampelos Pareira.

History.—The root of this plant was first mentioned by Piso, in 1658, under the name of Caapéba. It was introduced into Paris in 1688 by M. Amelot, the French ambassador at Portugal.

It is usually termed *Pareira* (Parreyra) *brava*, which means literally *wild* or *bastard vine*, on account of its supposed resemblance to the root of the wild vine. The Germans call it *Grieswurzel* (*i. e.* gravel root), on account of its beneficial effects in stone or gravel.

Botanical history.— Cissampelos Pareira is a climbing shrub, a native of South America,—particularly of Jamaica, Martinique, St. Domingo, &c. The root is woody and branching,—the stem round and smooth,—the leaves peltate, subcordate, ovato-orbiculate, on the under surface silky-pubescent (on which account, says Dr. Wright, the plant is called *velvet leaf*.) The flowers are small, yellow, and diœcious: the fruit is reniform, hairy, and red. In the Linnean arrangement, Cissampelos belongs to class *Diœcia*, order *Monadelphia*.

Physical characters.—The officinal part or root occurs in more or less cylindrical pieces, sometimes flattened or bluntly angular. Some of the pieces are as thick as a child's arm,—their length often a foot or more long. Externally they are covered with a dark brown rind or cortex, which is furrowed longitudinally, and wrinkled transversely. The wrinkles have very much the appearance of large, transversely elongated lenticellæ. The surface of the transverse section of the root is of a yellowish-grey colour, and presents a number of concentric circles (the annular layers), traversed by numerous radiating lines (medullary rays); between these lines are triangular bundles of woody fibres and ducts,—the latter are large, and being cut transversely, constitute the numerous holes or apertures presented by the cut surface.

The number of concentric circles varies with the age of the root. The fracture of the root is coarsely fibrous. The taste is sweetish—aromatic, afterwards bitter and unpleasant. The root is without odour.

Substitution.—Kunze, in his "*Pharmaceutische Waarenkunde*," remarks, that "on the whole, the Pareira has more the condition of a stem than of a root." In the Medical Gazette for September 24, 1836, we are told, on the authority of a highly respectable drug firm, that a spurious article (probably the stem of the Pareira) had been imported. In consequence of this notice, I have procured a sample of it: it is certainly a stem, since it has a distinct medulla; while the cortex is partially covered with a yellowish-white crustaceous lichen. Its age must be about seven years, since it has seven annual layers: it presents the same circles, rays, and duct apertures, observed in the genuine pareira root. The diameter of the stem is nearly three inches. Doubtless its effects are similar to those of the root, though from the larger quantity of ligneous tissue, it must contain a great deal of inert matter. "It yields," we are told, "only a very minute quantity of the extract; and the decoction prepared from it, according to the usual formula, has only a slightly bitter taste, instead of the strong bitter of the decoctions of the root."

Chemical composition.—The only analysis of this root with which I am acquainted, is that of Fenuelle, made some years since. According to this chemist, the constituents are—

1. A soft resin.
2. A yellow bitter principle, analogous to cathartin; soluble in alcohol and water, and precipitable by tincture of galls or subacetate of lead.
3. A brown colouring matter.
4. Vegeto-animal matter.

5. Fecula.
6. Super malate of lime.
7. Nitrate of potassa.
8. Ammoniacal and mineral salts.

The presence of starch, or fecula, in this root, is shown by the action of iodine on it. The infusion is precipitated by the infusion of galls, and is made brown by the chloride of iron.

The active principle of the root is said to be the yellow bitter principle above mentioned: but the presence of nitrate of potash may contribute to the diuretic effect. In all probability the yellow bitter matter is a mixture or compound of various principles.

Physiological effects.—I am acquainted with no experiments made to determine the effects of this root in the healthy state of the body. From its taste, botanical affinities, and effects in diseases, we may infer it to possess a tonic operation. Occasionally it acts as a diuretic. It has been supposed to exercise a specific influence over the mucous membrane lining the urinary passages. In large doses it is said to be aperient.

Uses.—It was originally introduced into medicine as a lithontriptic. Its powers in this way were at one time highly vaunted, and Helvetius even went so far as to assert that calculi the size of an olive had disappeared under its use, and that the operation for lithotomy was no longer necessary! We now employ it in the following cases:—

1. *As a tonic in dyspepsia*, where there are no symptoms of gastric irritation.

2. *In discharges from the urino-genital mucous membrane.*—It has been employed in gonorrhœa, leucorrhœa, and chronic inflammation of the bladder. In the latter of these diseases, Sir B. Brodie says he has seen more good done by this root than by the uva ursi. "I am satisfied," says this eminent surgeon, "that it has a great influence over the disease which is now under consideration, lessening very materially the secretion of the ropy mucus, which is itself a very great evil, and, I believe, diminishing the inflammation and irritability of the bladder also."

Mode of administration.—This root may be given in the form of *powder*, in doses of half a drachm or a drachm. The *infusion* of the Pharmacopœia is prepared by digesting six drachms of the root in a pint (twenty ounces) of boiling water. The dose of this preparation is one or two fluid ounces. Sir B. Brodie recommends a *decoction* of the root, which he directs to be thus prepared:—"Take half an ounce of the root of the pareira brava; add three pints of water; let it simmer gently near the fire until reduced to one pint. The patient may add to it some of the tincture of hyoscyamus; and in those cases in which there is a deposit of the triple phosphates, you may also add some of the muriatic or diluted nitric acid." The *extract*, which is now an officinal preparation, may be used either alone or in conjunction with the infusion. A *tincture*, or *essence*, as it is sometimes called, has been prepared by digesting one part of the root in five parts of rectified spirit. It is reputed diuretic and anticatarrhal, and has been given in doses of a fluidrachm.

AURANTIACEÆ.

Two genera of this family require to be noticed—namely, Feronia and Citrus.

Feronia Elephantum.

This is a large tree, found in most parts of India. It belongs to class *Decandria*, order *Monogynia*, in the Linnean arrangement. From the stem there exudes a gum, which, according to Dr. Ainslie, is used for medicinal purposes by all the practitioners of Lower India, and very closely resembles the gum of the Acacia, commonly known in this country by the name of Gum Arabic.

It is not improbable, therefore, that part of the gum brought to us from India, and which is known in this country by the name of *East Indian Gum Arabic*, may be the produce of this tree. Further information on this point is, however, required. When I describe the Acacia gum, I shall notice that brought from India.

Citrus.

Under this generic name is included a considerable number of plants. Botanists, however, are not quite agreed as to which of these form distinct species, and which merely varieties.

Characters of the genus.—The plants are trees, or shrubs, with simple, alternate, petiolated leaves. The calyx is pitcher-shaped, and from three to five cleft; the corolla consists of from five to eight petals; the stamina are numerous (from twenty to sixty), their filaments being combined into several fasciculi, and their anthers being oblong; the style is round, the stigma is hemispherical. The fruit is baccate, with from seven to twelve many seeded, pulpy, cells. The rind of the fruit is considered by Decandolle to be analogous to a torus, but by Mr. Lindley is, perhaps more correctly, regarded as the union of the epicarp and sarcocarp, analogous to that of the drupe: the external yellow portion of the rind is termed *flavedo*, and, by the French, *zeste*; in it are found the *vesicular*, or *rounded receptacles* (formed by the dilatation of the intercellular passages), which contain an essential oil. The internal portion of the rind is white and spongy; the cells of

the fruit are filled with little pulpy bags, which contain an acid juice, and may be readily separated from each other. The seeds are exalbuminous, and usually show very distinctly the raphe and chalaza. Thus, on the external surface of an orange or lemon seed, the markings of the raphe are very evident, and when the external coat of the seed is removed, the place of the chalaza is indicated at one end of the seed by the dark-coloured spot on the inner coat.

In the Linnean arrangement, the plants of this genus belong to class *Polyadelphia*, order *Polyandria*. The officinal species are four in number—namely,

1. Citrus Limetta; *var.* Bergamium.
2. Citrus Limonum.
3. Citrus Aurantium.
4. Citrus vulgaris.

But to render the account more perfect, we may notice another species—namely, Citrus medica. I shall speak of them in the order they are described in Decandolle's Prodromus.

1. *Citrus medica.*—The fruit of this species is denominated the *citron*. It is supposed to be the μηλέα μηδική of Theophrastus, and the *malus Assyria vel medica* of Pliny. Risso has noticed three varieties of it.

The following are the distinguishing characters of the species:—The petioles are naked; the leaves are oblong, acute, and very finely dentate; the flowers have forty stamina; the fruit is oblong, rugous, with a thick rind, and a slightly acid juice.

Fig. 156.—*Citrus medica; the Citron.*

Those fruits which preserve their pistilla are called *pitima*: they are sought after, says Risso, by the Jews, who suspend them to palms at the feast of the tabernacle.

The leaves are interposed between linen, to which they communicate a fragrant odour: moreover, they are said to keep away insects.

By distillation, there is obtained from the rind of the fruit a fragrant oil (*oleum essentiale citri*), lighter than that procured from the lemon: it is employed by perfumers.

There is another oil met with in commerce, under the name of the *essential oil of cedra*, and in most books it is erroneously stated to be identical with the oil of citron. It has the combined odour of the citron and bergamot. It is employed by perfumers. It has the same elementary composition as the essential oil of lemons, presently to be mentioned.

2. *Citrus Limetta.*

This species is characterized by naked petioles; ovate, roundish, serrated leaves; flowers with thirty stamina; the fruit (commonly termed the *lime*) is globose, with a firm cortex and sweet pulp.

Fig. 157.—*Citrus Limetta; the Lime.*

Risso mentions seven varieties: one of these is the *Bergamium*, from the flavedo of the fruit of which is obtained an essential oil—the *essence* or *oil of bergamot* of the shops—called in the Pharmacopœia the *oleum bergamii*. This oil has a pale yellow colour, a remarkable odour, and a specific gravity of 0·885. Its elementary composition is similar to that of the essential oil of lemons. It is used in medicine only on account of its odour.

3. *Citrus Limonum.*

This species is characterized by its petioles being somewhat winged. Its leaves are oblong, acute, and dentate; its flowers have thirty-five stamina, but are often without pistilla; the fruit (called the *lemon*) is oblong, has a very thin rind, and a very acid juice.

Risso includes no less than twenty-five varieties in this species.

Fig. 158.—*Citrus Limonum ; the Lemon.*

We employ in medicine the rind, the essential oil obtained from the rind, and the juice. From the latter is procured citric acid.

1. *Essential oil of lemons.* — This is the *oleum limonis* of the London Pharmacopœia. It is prepared as follows: the lemons are rasped to remove the flavedo, which is afterwards expressed in hair sacks. The oil which is thus procured is received in flasks, where it is allowed to deposit; it is then decanted and filtered. As thus procured the oil is very fragrant, but somewhat turbid, and liable to undergo change from the mucilage present. It may be obtained also by distillation, and the oil is then more permanent, but its flavour is less pleasant and sweet; and hence this process is rarely practised. The greater part of the oil of commerce is brought from Portugal and Italy; some, however, is procured from France.

When quite pure it is colourless, limpid, and of a fragrant odour, like that of lemons. Its specific gravity at 70° F. is 0·847. It is soluble in all proportions in anhydrous alcohol; it boils at about 345° F. When the commercial oil is exposed to a temperature of 4° F., it deposits white crystals, whose nature is not known; but rectified oil does not thus deposit.

This oil is composed of two other isomeric oils; one (called by Dumas *Citrene;* by Blanchet and Sell *Citronyle*) capable of forming a crystalline compound with muriatic acid; the other oil (called *Citryle*) does not form a crystalline compound with this acid.

According to the analysis of Dumas, the oil of lemons is composed of—

10 atoms carbon	60
8 atoms hydrogen	8
	68

This composition is analogous to that of the oil of turpentine, but the condensation is one half less. The oils of cedra, bergamot, and probably of orange, have a similar composition.

When hydrochloric acid gas is passed through this oil, a crystalline compound is formed, which has been termed *artificial camphor of the essence of lemon*, or *hydrochlorate of citrene*. It is composed of—

10 atoms carbon	60
9 atoms hydrogen	9
1 atom chlorine	36
	105

Or, we may consider it as composed of—

1 atom citrene	68
1 atom hydrochloric acid	37
	105

This oil is employed as a perfume, as a flavouring ingredient, and, when distilled, it constitutes the *scouring drops* of the shops, used for removing grease spots from silks, and other textures. It is regarded as diaphoretic.

2. *Lemon peel,—the cortex limonum* of the Pharmacopœia. The flavedo of this cortex is of a pale yellow colour, rough from the presence of the oil receptacles, of a strong peculiar odour, and an aromatic bitter taste. The internal portion of the cortex is white, spongy, and almost without odour or taste. The watery infusion of lemon peel becomes of a greenish brown colour, on the addition of the chloride of iron. If water be distilled from this freely, we obtain the *water of lemon peel* of the Edinburgh Pharmacopœia, which, however, is rarely used in medicine. Lemon peel may be regarded as a stomachic and aromatic substance. It is employed more as a flavouring ingredient than for its proper medicinal effects. It is one of the ingredients of the *compound infusion of orange peel*, and of the *compound infusion of gentian*.

3. *Lemon juice: succus limonum.*—Lemon juice is composed, according to Proust, of—

Citric acid	1·77
Malic acid, gum, and bitter extractive	0·72
Water	97·51
	100·00

On account of the presence of mucilage and extractive, it is very apt to undergo decomposition, though various methods have been resorted to for the purpose of preserving it. As a substitute for lemon juice, we may employ the following:—

Water, 16 fluid ounces,

Citric acid, 8½ drachms,
Oil of lemon, a sufficient quantity, to give it the proper flavour.

Lemon juice owes its medicinal properties to the citric acid contained in it: it is refrigerant, and when properly diluted, and slightly sweetened, is a most agreeable and refreshing beverage.

The only officinal preparation of this juice is the *syrup of lemons* of the Pharmacopœia.

1st. *In the preparation of refrigerant drinks.*—Thus it is added to barley-water, or it is mixed with sugar and water, to form the beverage called *lemonade* (the *hydrolé de citrons* of the French pharmacologists). The proportions of the ingredients for making this latter compound are two lemons sliced, two ounces of sugar, and two pints of boiling water: digest until cold. These drinks are most refreshing and grateful in febrile and inflammatory diseases, in hæmorrhages, &c.

2. *In the formation of the effervescing draught.*—A table-spoonful, or four fluid drachms, of lemon-juice, are about equal to seventeen grains of crystallized citric or tartaric acid. The effervescing draught made with lemon-juice, or citric acid and bicarbonate of potash, is one of the best remedies we possess for allaying irritability of the stomach.

3. *As an antiscorbutic*, lemon-juice has long been regarded as invaluable. On account, however, of the difficulty of preserving it, the crystallized citric acid and oil of lemons are usually substituted. Sir Gilbert Blane says, "those only who have made themselves acquainted with the early part of the naval history of this country, or those who have perused the interesting, popular, and eloquent narrative of Commodore Anson's voyage, can duly appreciate the value of this simple remedy" (lemon-juice).

4. *As an antidote to poisons.*—In cases of poisoning by alkalies, the vegetable acids are the antidotes, and the most convenient and easily procurable acidulous substances are commonly vinegar and lemon-juice. In poisoning by narcotic substances, as opium, after the poison has been evacuated from the stomach, lemon-juice may be given to counteract the effects.

Citric acid: History.—This acid was first procured in the solid state by Scheele, in 1784. Mixed with little or no malic acid, it is found in the fruit of the Lemon, Orange, Citron, Dulcamara, Dog Rose, Bird Cherry, red Whortleberry, and Cranberry. Mixed with about an equal quantity of malic acid, it is found in the Gooseberry, red Currant, Bilberry, Pyrus Aria, Cherry, Strawberry, Raspberry, and Cloudberry. According to Vauquelin it exists in the Tamarind, mixed with malic and tartaric acids. Citrate of potash is found in Aconitum Lycoctonum, in the fruit of the Gooseberry and Capsicum, in the root of Asarum europæum, and the tubers of Helianthus tuberosus. Citrate of lime is met with in Asarum europæum (Salanum tuberosum) and also in the bulbs of Garlic, and the herbaceous part of Isatis tinctoria.

Preparation.—It is obtained from lime or lemon juice, the latter of which is imported for the purpose in pipes and hogsheads. This juice, placed in a large vat, is saturated with chalk or whiting. The supernatant liquor is then drawn off, the precipitate (citrate of lime) passed through a sieve, and frequently washed with warm water, until the mucilage and other soluble impurities be entirely washed off. The citrate of lime is then decomposed by sulphuric acid diluted with water; sulphate of lime separates, and citric acid remains in solution. The clear solution is then to be evaporated (manufacturers use for this purpose leaden boilers), and the concentrated solution set aside to crystallize. To purify the acid the crystals are to be re-dissolved, and the solution again put by to crystallize; this process is to be repeated until the crystals have the requisite degree of whiteness.

Properties.—Anhydrous citric acid is white and odourless, and strongly reddens litmus. It consists of—

4 atoms carbon	24
2 atoms hydrogen	2
4 atoms oxygen	32
	58

The primary form of crystallized citric acid is the right rhombic prism. Those crystals which are procured by the cooling of a hot solution of the acid consist of—

1 atom anhydrous citric acid	58
1 atom water	9
	67

Berzelius says that the crystals of commerce, formed by spontaneous evaporation, usually contain one-third of an atom of water more than is here stated.

The crystals absorb moisture from a damp atmosphere; and Dumas, therefore, is in error when he says they are unalterable in the air. When they are distilled in a retort, they yield among other products an acid liquor, from which has been procured a peculiar substance called *pyrocitric acid.*

Characteristics.—A solution of citric acid does not produce any precipitate with lime water: hence it may be readily distinguished from a solution of oxalic acid. From tartaric acid it may be distinguished by its not forming a crystalline precipitate when an excess of it is added to a solution of carbonate of potash. It forms

with barytic water a white precipitate (citrate of barytes), soluble in excess of acid. With a solution of acetate of lead it also causes a white precipitate (the citrate of lead.)

Adulteration. — Not unfrequently citric acid is adulterated with tartaric acid; this is especially the case when it is sold in a pulverent form. The fraud may be easily discovered: dissolve the suspected acid in water, and to the solution thus obtained add cautiously a solution of carbonate of potash, taking care that the acid be in excess. If any tartaric acid be present, a white crystalline precipitate (bitartrate of potash) is formed.

Saturating power.—As this acid is frequently employed in the making of effervescing mixtures, it may not be useless to mention the quantities of the alkaline carbonates necessary to saturate it.

20 grains of

Sesquicarbonate of ammonia will saturate	24 grains citric acid.
Carbonate of potash	17 ditto.
Bicarbonate of potash	14 ditto.
Carbonate of soda	nearly 10 ditto.
Sesquicarbonate of soda, rather more	$16\frac{3}{4}$ ditto.

Physiological effects: (*a.*) *On vegetables* — I am not acquainted with any experiments made with citric acid on vegetables; but its effects are doubtless analogous to those of tartaric acid, to be noticed hereafter.

(*b.*) *On animals generally.* — Orfila ranks citric acid among the irritant poisons; but Drs. Christison and Coindet gave drachm doses to cats, without observing that the animals suffered any inconvenience.

(*c.*) *On man.*—We are not aequainted with the effects of large quantities of this acid on man. Dissolved in water, and taken in moderate doses, its effects are analogous to those of the dilute mineral acids before mentioned; that is, it allays thirst, diminishes preternatural heat, checks profuse sweating, and promotes the secretion of urine. Vogt says it acts more on the skin than tartaric acid (in this respect being similar to acetic acid), and less on the alimentary canal and urinary organs. Continued use gives rise to disorders of the digestive organs.

Uses.—The uses of citric acid are the same as those of lemon juice already mentioned, and for which it is employed as a substitute. A solution of citric acid has also been used as a solvent for opium, by Dr. Porter, of Bristol.

4. *Citrus Aurantium.*

The essential characters of this species are, petioles nearly naked; leaves ovato-oblong and acute; flowers containing twenty stamina; fruit (the *common sweet orange*) globose, with a thin cortex and sweet pulp.

Risso enumerates no less than nineteen varieties.

The leaves of the orange-tree are feebly bitter, and contain a volatile oil. They have been used in the form of powder, or infusion, in spasmodic diseases. Distilled with water, they yield a very fragrant oil, called the *essence de petit grain*. Formerly, the oil sold under this name was procured

Fig. 159.—*Citrus Aurantium; the Orange.*

from unripe oranges, but, as thus obtained, it is very subject to decompose.

Orange flowers (*flores aurantii*) are now officinal articles. According to Boullay they contain ætherial oil, yellow, bitter, extractive, gum, acetic acid, and acetate of lime. They yield, by distillation, a very fragrant oil, called, by perfumers, the *oil of Neroli*, but which is termed, in the Pharmacopœia, *oleum aurantii*. The essence de petit grain, being much cheaper, is frequently substituted for it. The oil of Neroli is used in medicine, on account of its flavour.

The small green fruits of the orange-tree, which fall during the great heats of the summer, are carefully collected and dried. They form the *orange berries*, the *baecæ aurantii* of the old Pharmacopœia. Their size does not exceed that of a cherry; their colour is dark greyish or greenish brown; they have an aromatic odour and bitter taste. When smoothed by a lathe, they constitute the *issue peas* of the shops: they are preferred to ordinary peas for keeping up the discharge of an issue, on account of their pleasant odour. An infusion of orange berries is rendered green by the chloride of iron:

this arises from the presence of some gallic acid. Two analyses of them have been made—one by Lebreton, the other by Brandes. The bitter matter is called, by the latter chemist, *Aurantiin*. Lebreton speaks of a crystalline matter which he terms *Hesperedin*, and which appears identical with what Brandes called a *peculiar neutral crystallizable substance*.

The ripe fruit of the sweet orange is useful either for its rind or its acid juice. The *rind* is ordered in some pharmacopœias, though not in that of London. It is a mild tonic and aromatic, principally useful for its flavour. "Large quantities," say the editors of the United States Dispensatory, "are sometimes productive of mischief, especially in children, in whom colic, and even convulsions, are sometimes induced by it. We have known the case of a child, in which death resulted from eating the rind of an orange." A very fragrant oil (the *essential oil of sweet orange* of the perfumer) is obtained from the outer rind.

The *juice of the sweet orange* consists of citric mixed with some malic acid, citrate of lime, mucilage, albumen, sugar, and water. It is a very refreshing and grateful beverage in febrile complaints.

The seeds yield by expression a bland oil.

5. *Citrus vulgaris.*

The petioles of this species are winged; the leaves are elliptical, acute, and crenulate; the flowers have 20 stamina; the fruit (termed the *Seville* or *bitter orange*) is globose, with a thin and scabrous cortex, and a bitter acrid pulp.

Fig. 160.—*Citrus vulgaris; Seville Orange.*

Risso mentions eleven varieties of it.

The exterior rind of the Seville orange (*cortex aurantii*) is directed in the London Pharmacopœia. It is much more bitter than the rind of the sweet orange, and therefore may be regarded as more powerfully tonic. It is, however, principally employed on account of its flavour. It may be given in *substance*, in doses of half a drachm to a drachm. The *compound infusion* may be given in ounce doses; the *confection* is usually employed as an adjunct to tonics or purgatives; the *tincture* is a useful flavoring ingredient,—as is also the *syrup*.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture VII.

Scarlatina without eruption, followed notwithstanding by desquamation — Thoughts on the nature of desquamation—Latent Scarlatina, followed by Anasarca—General proposition respecting the symptoms of animal poisons—Morbid appearances after delirium in fever—Treatment in anticipation of cerebral symptoms—Great advantage of blisters judiciously employed—Notice of the old mode of blistering.

Before I resume the thread of my discourse, permit me to mention some curious facts recently observed. Dr. Marsh and I attended, not long since, a lady who had been affected for some days with fever and sore throat. She had no eruption on any part of her body, but from the character of the fever, and the peculiar appearance of the throat, we suspected she was labouring under an attack of scarlatina. Her family were very anxious to ascertain the precise nature of her complaint; and I visited her twice a day for the first four or five days of her illness, carefully examining the skin at each visit, but could not discover the slightest trace of an efflorescence of any description. She continued for several days to suffer from the fever and sore throat, and was at one time in a dangerous condition, but ultimately recovered by great care and the use of appropriate remedies. Now I watched this case from the sixth hour after its commencement to its termination, and repeatedly examined the skin, particularly that of the breast, abdomen, and inside of the knee and elbow joints, places in which the eruption shews itself when it appears at all, but could not discover any vestige of it. You will often find a diffused redness about the knees and elbows, in cases where the eruption does not appear on any other part of the body; but in this instance there was not the slightest deviation from the natural hue. Yet the result proved that it was scarlatina; for the desquamation of the cuticle, which always attends this disease, took place, and the lady com-

municated the infection to several members of the family. A young gentleman residing in the house got a bad attack of scarlatina, two of the servants were also attacked, and the lady's father got sore throat; in fact, there could be no doubt as to the nature of the disease. During her convalescence she had desquamation of the cuticle; and this is a point to which I would particularly call your attention. We are taught to look upon desquamation as the result of cutaneous affections of an inflammatory character; and it is an opinion very generally maintained, that in scarlatina, as in psoriasis, the peeling off of the cuticle depends on a peculiar state of the skin produced by inflammation. It is stated that the increased vascularity of the skin occasions a morbid secretion, and subsequent detachment, of the epidermis, and that the same phenomenon is observed in all cutaneous affections of an inflammatory character. This may be generally, but not universally, true; for here we had an extensive desquamation of the cuticle without any eruption, without any previous redness, pain, or remarkable heat; in fact, without any of the phenomena which are regarded as constituting inflammation. This seems to prove that there is something more than inflammation concerned, as preparatory to that process which is termed desquamation, and that the change which the skin undergoes is not to be looked upon as a mere consequence of inflammation occupying the external surface of the corium.

Another curious fact observed in this lady's case: since the attack which I have just described she has been shedding her nails; that is to say, the nails of the fingers are all dropping off, and yet there is no appearance of inflammation of any kind about the hands to explain the occurrence. You are, of course, all aware that the dropping off of the nails is a species of desquamation. From the peculiar structure of the nail, and the mode in which it is formed in the matrix, it does not drop off at once like a scale of epidermis; still I think we are authorized in looking upon the shedding of the nails as a species of desquamation. This affords a very curious subject for investigation, as connected with the history of fever. It is an opinion entertained by many persons, that desquamation of the skin takes place at a particular period of typhus, and that this is not an occasional, or varying, but a constant and general, phenomenon. This statement has been put forward most strongly by Dr. Perry, of Glasgow; and he is also of opinion, that the period in which typhus is most contagious, is during the desquamation of the cuticle. It is also asserted, that scarlatina is more contagious during desquamation than at any other period of the disease. This is at least the popular idea; how true it may be my experience or observation does not enable me to decide; nor am I prepared to offer any thing like an explanation of the occurrence. All I shall say on the present occasion is, that the occurrence of desquamation of the cuticle in typhus, and in cases of scarlatina without eruption, has greatly altered my ideas as to the connexion between it and cutaneous inflammation I think, at least, that the process of desquamation in such cases is very different from inflammation, and that the morbid action of which desquamation is the result, has very little in common with the ordinary process of inflammation of the cutaneous surface.

A gentleman who is in the habit of attending my lectures informs me that he has seen three cases of this form of scarlatina, characterized by the absence of the external efflorescence. They occurred in young persons, after puberty, and between the ages of 15 and 25. Each of these cases exhibited a considerable degree of fever, with increased quickness of pulse, thirst, heat of skin, diminution of the urinary secretion, and, after the first or second day, much depression, which continued for two or three days, and then yielded to treatment. The tongue was moist, but pointed, tremulous, red, and injected. The velum, isthmus faucium, tonsils, and upper part of the pharynx, were somewhat swollen, and of a very peculiar dark-red colour, the redness being general, and equally diffused over the whole of the upper part of the pharynx as far as it could be examined. But the following case, which was very lately communicated to me by a practitioner of very great eminence in this city, is still more curious. Some years ago scarlatina broke out in this gentleman's family, and attacked all his children with the exception of one young lady, who, although in constant attendance on her sisters during their illness, did not exhibit any symptoms whatsoever of the disease. When all the children had become convalescent, they were removed to the country for the benefit of air, whither she also accompanied them. Here she was, much to the astonishment of her family, attacked by the peculiar anasarca observed in persons who have recently laboured under scarlatina. Her father, under whose observation she had been during the whole time, was very much struck with the occurrence; he paid particular attention to the case, and feels convinced that it was the result of latent scarlatina. This case, connected with those already detailed, are of great interest in a general pathological point of view. They appear to prove the fact, that in some instances diseases produced by contagion do not give rise to the

whole train of phenomena by which they are ordinarily characterized.

Let us turn for a moment to some of those diseases caused by the action of animal poisons on the system, as for instance measles. The symptoms which generally attend and characterize measles are universally known. After an attack of fever, on the third or fourth day, coryza, sneezing, hoarseness, and cough, are complained of, and then a rash appears, first on the face, and afterwards on the body and limbs. But it is not necessary that all these symptoms should appear, and that the sequence of morbid phenomena should be uninterrupted throughout; on the contrary, it frequently happens at particular periods, and in certain constitutions, that some of the most usual symptoms are scarcely observed, or altogether absent. You will find this point insisted on by Dr. Bateman, who has given a detailed description of a form of measles in which the catarrhal symptoms are wanting, and which he has termed Rubeola sine catarrho. The same remark applies to many other forms of disease. Thus we may have pneumonia without cough, and pleuritis without pain in the side. Those who have witnessed the course of the late epidemic cholera in this country, will recollect that many cases occurred in which vomiting, purging, or cramps, were not observed.

If we turn to fever, we find that the animal poison to which it owes its origin generally exhibits a certain number of symptoms, congregated together, or observing a determined order and succession; and these we meet with in most of the cases which come before us in practice. But we now and then see fever patients in whom one or more of the most prominent symptoms are absent. Thus occasionally there is no quickness of pulse or appearance of vascular excitement; in some there are no cerebral symptoms; in others no increase in the temperature of the skin. Indeed, I might go through the whole group of symptoms which accompany fever, and show that almost every one of them may be occasionally absent, and yet the fever of a severe and dangerous type. I recollect pointing out to the class last year the case of a man labouring under chronic enlargement of the spleen. He had been working for two or three seasons in some of the marshy districts of England, and had been occasionally ill, but never had symptoms of regular intermittent; in fact, he had escaped the intermittent itself, but not what are usually deemed the consequences of it. We have been in the habit of explaining the enlargement of the spleen by referring it to the conflux of blood towards the internal organs, particularly the liver and spleen, during the cold stage of intermittent; and we have endeavoured to explain the subcutaneous œdema which follows scarlatina, by attributing it to previous inflammation of the skin and subcutaneous cellular tissue; but the observations and facts which I have now brought forward will show that these opinions were founded on erroneous ideas. Turning to cases of chronic disease, we find in some, as for instance syphilis, that the poison taken into the system gives rise in most cases to a determinate order of symptoms, *e. g.* bubo, sore throat, eruptions on the skin, nodes, and syphilitic cachexy. Mr. Hunter has been at great pains in determining the order of the parts, and pointing out the tissues which are successively affected, and it is of considerable importance to have correct notions on this point; but although the number and order of symptoms marked out by Mr. Hunter and others may be observed in most cases, they are not so in all; and the same remark which has been made on the occasional absence of one or more important symptoms in scarlatina will apply with equal force to syphilis. Now and then the morbid poison which excites syphilis does not affect the constitution in such a manner as to occasion the production of all the symptoms which usually characterize this disease, and thus a variety of venereal is formed, which often proves a source of great embarrassment not only to the young and inexperienced, but even to the senior members of the profession.

It is of great consequence, in a practical point of view, to bear in mind the general proposition I have announced, viz. that in both acute and chronic diseases *a constitutional affection may display its existence by only one or two of the numerous symptoms which usually accompany it;* and this occurrence seems more frequent in the case of diseases produced by contagion and morbid animal or vegetable poisons, than in the case of maladies generated by causes developed in the system itself.

I spoke at my last lecture of a man named Cassels, who died in the fever ward with symptoms of cerebral excitement, and stated that I regretted having omitted to leech his head, and prescribe tartar emetic in the form of enema. Since that time we have had an opportunity of examining his body, and the results of the dissection are well worthy your attentive consideration. He was a young man of a robust habit and apparently good constitution, and laboured under the ordinary form of maculated typhus. Shortly after his admission he was attacked with delirium, which was soon afterwards followed by coma and death. Now, suppose you were called to see a patient, not labouring under typhus, but exhibiting a

similar train of symptoms,—that is to say, violent delirium, accompanied by flushing of the face, suffusion of the eyes, headache, and a tendency to get out of bed—in fact, a state of furious excitement requiring the restraint of the strait waistcoat,—what idea would you be likely to form of the condition of the brain? If a patient of this kind had no typhoid symptoms, you would certainly say that he was labouring under meningitis or cerebritis; and if the case proved fatal, you would naturally expect to find lesions of the brain fully sufficient to account for all his symptoms. And you would in all probability find extensive thickening of the membranes of the brain, with subarachnoid effusion, or you would discover softening, increased vascularity, and suppuration of the encephalic mass. But, here, a man in fever exhibits all the symptoms of cerebral inflammation; the cerebral affection runs on to a fatal termination with great rapidity; he dies comatose. And what do we find on dissection? Doubtful signs of congestion, and no distinct evidence of inflammation; a slight opacity of the arachnoid at the base of the brain, and about a tea spoonful of clear subarachnoid effusion. Now this is a point to which I would earnestly call the attention of every inquiring student. A patient, during the course of typhus, is seized with symptoms which are generally regarded as characteristic of congestion and inflammation of the brain; he dies to all appearance in consequence of the intensity and violence of these symptoms, and on dissection little or no trace of cerebral disease is found. In the case under consideration, the symptoms present were strongly indicative of congestion if not of inflammation; and had the man been free from typhoid symptoms, you would expect to find decided traces of inflammatory mischief. This seems to prove that in the production of cerebral symptoms in typhus, some cause not to be recognized by the production of cerebral lesions, or in other words, something besides mere congestion or inflammation, exists. I have now examined a great number of cases of this description, and the examination has brought home to me a strong conviction, that the delirium of fever depends upon something more than mere inflammation or congestion. There is another fact, the study of which is well worthy of attention, as it appears to support very strongly the views I have put forward; and this is the occurrence of analogous symptoms under opposite conditions of the cerebral circulation. Take, for example, the phenomena of vertigo and headache. Now, these symptoms are found in states of the brain which are directly opposite. In incipient congestion of the brain, in that turgescence of the cerebral vessels which precedes apoplectic seizures, one of the most frequent symptoms is vertigo, and the same thing may be affirmed with respect to headache. But we observe the very same symptoms under circumstances totally dissimilar. Frequently, while bleeding a patient for some affection of the lungs or bowels, or for some accident, we find that after a certain quantity of blood has been lost, the patient becomes pale; and while the pallor is coming on, he often gets quite giddy, and sometimes complains of headache. Gentlemen who are attending lying-in hospitals are well acquainted with the headache, giddiness, and tinnitus aurium, so constantly complained of by females who have suffered from excessive uterine hæmorrhage. Hence you perceive facts are not wanting to show that opposite states of the cerebral circulation, a superabundance or deficiency of pressure on the brain, may give rise to similar phenomena. You saw an illustration of this in the case of one of our patients in the fever ward this morning. He was quite free from headache as long as he remained in the horizontal posture, but the moment he sat up in bed he complained of headache. Yet this was a man who had not the slightest symptom of determination to the head, and who had been sufficiently depleted during his illness. You will also recollect the fact, that persons who have had a long illness, and remained for many days in the horizontal posture, generally get weakness, giddiness, and sometimes headache, at first when they attempt to sit up during convalescence. This is a point which should always be borne in mind. You are consulted by one person who complains of giddiness, tinnitus aurium, and frequently-recurring headache. You examine the patient carefully, and you find all the symptoms of unequivocal determination to the head. You are applied to by another person labouring under the same symptoms; but how different is the state of the brain found to be on a careful examination. One patient is robust, of florid complexion, and with a hard bounding pulse; the other is a weak chlorotic female, who has been ailing for months, and whose pulse is so weak, that a slight degree of pressure obliterates the canal of the artery. Yet the tinnitus aurium, giddiness, and headache, complained of by the latter, is just as bad and as troublesome as in the case of the former.

From a consideration of these points, you will perceive that, for the production of cerebral symptoms in typhus, there must be something more than mere congestion or inflammation of the brain; but you are not to infer from this that there is

no necessity for taking any steps to obviate or remove congestion of the head in fever. On the contrary, I am of opinion that in typhus one of the principal sources of danger is connected with the head, and that the cerebral symptoms should be always watched with the most unremitting and anxious attention. It is this which constitutes the great difference between the mortality in private and hospital practice. In private practice the physician is called at an early period of the disease, and has an opportunity of checking the cerebral symptoms before they rise to a dangerous height; but hospital patients, in general, are admitted at an advanced stage of fever, and in many instances have been improperly treated, or wholly neglected from the commencement. I am also of opinion, that when there is any evidence of determination to the head, the best way of preventing dangerous cerebral symptoms is to deplete the head by the application of a sufficient number of leeches, and then to proceed to the use of blisters. You should direct your attention as much to the head as to the bowels, and one of the best modes of doing this is to apply six or eight leeches behind the ears, and repeat them every six hours until relief is obtained. You should then order the head to be shaved, and kept constantly covered with cloths wet with warm vinegar and water, and at the same time have recourse to the internal use of tartar emetic and nitre, or blue pill, with James's powder. Should this plan fail in giving relief, you have a powerful aid in the application of blisters to the scalp, and this must be done extensively, and at once.

Most of the fatal cases of typhus at present die of cerebral disease. But in the majority of instances you will find that these were cases in which the head was neglected, and in which the appropriate remedies were used too late. In cases treated from the commencement with judgment, decision, and attention, although the head may be threatened, you will not have one-twentieth of the mortality observed in those cases where the early prevention of cerebral symptoms has not been an object of care. One of the worst cases of cerebral disease which I have witnessed for many months, and which would have probably terminated fatally before the seventh day, I saw in consultation with Mr. Daly, and yet this case was saved by prompt and decided measures calculated to counteract the cerebral symptoms. I have also very recently witnessed another very remarkable case of this description at Bray.

The patient, a gentleman very full and plethoric, but remarkably temperate, aged 35, was attacked after exposure to cold by intensely violent maculated fever, for which aperients of an active nature were exhibited. I saw him in consultation with Dr. Heffernan on the 5th day. His headache had been relieved by leeching, but his breathing was very quick, and he was almost constantly asleep. Skin very hot; eyes somewhat suffused; most copious crop of maculæ. We at once blistered the whole scalp; and on the 8th day blistered it again, and also the nape. On the 9th day the cerebral symptoms, *which we had been endeavouring to anticipate*, came on, but probably our treatment prevented them from being fatal; for when they appeared, the application of tartar emetic ointment induced a purulent discharge from the whole surface of the twice blistered scalp, in the course of a few hours, and three grains of tartar emetic given in divided doses that day procured a complete cessation of the symptoms, after—mark, after—the pupils had been dilated, and one fit of slight paralysis of the mouth and tongue had taken place.

The result of all my experience in fever is, that the majority of fatal cases are rendered so, in this country at least, by severe cerebral symptoms supervening sooner or later in the disease. Delirium, sleeplessness, stupor, convulsions, extreme subsultus, jactitation, sluggish and dilated, or else extremely contracted, pupils; these are the symptoms we have to fear after the fever has lasted some time; and let me repeat it, the chief art of the physician consists not so much in remedying these symptoms, as in anticipating them. When he judiciously attempts this, he may not, indeed, always succeed in altogether preventing their supervention, but he will, in the great majority of cases, be successful in diminishing their violence, and preventing their usual disastrous effects.

I shall now resume the subject of blistering in fever, on which I made some observations in my last lecture. I have spoken of it chiefly as a powerful revulsive remedy in the treatment of cerebral congestion; let us now treat of its employment with other objects in view. In the first place, as has been already explained, blisters may be used as most energetic stimulants in cases where the powers of life flag, and threaten a sudden cessation. Occasionally, in fever, you will find the vital tone reduced to a very low pitch, the heart uncertain in its action, the pulse irregular, the respiration feeble, the skin cool, and the patient so weak that he cannot be lifted up, or even turned in bed without having a tendency to faint. Here we have to superadd to the ordinary treatment of fever the prompt exhibition of remedies calculated to meet such emer-

gencies, and in addition to internal stimulants, we have recourse to powerful stimulation of the cutaneous surface by what are termed flying blisters. One of the best remedies in such cases is a large blister applied over the region of the heart, to be left on for two or three hours, or until the vascular action of the skin is sufficiently excited. When the patient appears to labour not only under sudden weakness of the heart, but also of the capillary and nervous systems, as shown by coldness of the extremities and sinking of the pulse, it will be necessary to apply flying blisters, not only over the region of the heart, but also over various parts of the chest, the epigastrium, and the inside of the legs and thighs. You will find this plan of treatment frequently succeed in cases which have a very unpromising aspect. I have now witnessed many instances of this description, in which, from cold, neglect, or debilitating treatment, the patients appeared moribund, with lividity of the extremities, hippocratic face, cold skin, and failing pulse; and I have seen them saved, as it were miraculously, by the use of carbonate of ammonia, musk and wine, and the application of warm fomentations to the limbs, followed by a succession of flying blisters.

The next use to which we apply blisters is in the treatment of those pulmonary affections which arise during the course of typhus. From what you have seen of the present epidemic, you must be convinced that bronchitis is one of its most frequent complications, and that few patients pass through fever without having some affection of the bronchial mucous membrane. You are also aware, that when bronchitis attacks the more minute ramifications of the bronchial tubes, it is very apt to produce congestion and engorgement of the lung. We meet with pneumonia much less frequently in fever, but it is occasionally observed, and requires the most prompt and decided treatment. In pneumonia, as well as in congestion of the lungs, accompanied by inflammation of the smaller bronchial tubes, blisters afford us a most valuable adjunct to the other means which we employ, and admit of being used in cases where no other mode of depletion could be safely borne. The affections of the lung in fever are of no small importance, and the stethoscope has not conferred a greater benefit on practical medicine, than by indicating, in diseases of the chest, not merely the existence of disease, but also its locality, extent, and precise nature. It points out to us the portion of the chest in which the bronchial tubes are chiefly engaged, and informs us with certainty when the affection of the smaller tubes and air-cells has given rise to pulmonary engorgment. The experienced stethoscopist will in such cases be aware of the exact site and nature of the affection, where the mere symptomatic practitioner would be unable to acquire any thing more than a loose and undefined notion of pulmonary disease. The latter employs his depleting means at random, and frequently abstracts a large quantity of blood, with little benefit to his patient; the former, aware of the exact situation and extent of the disease, applies his leeches or cupping glasses immediately over the engorged or inflamed portion of the lung, and relieves his patient at the expense of a comparatively small loss of blood. The same observation will apply, with equal force, to the use and application of blisters. A good and accurate knowledge of the various stethoscopic phenomena is besides of so much more value in the treatment of fever, as, at certain seasons of the year, almost every case of fever will be complicated with pulmonary derangement; and it may happen, during the course of an epidemic, that the lungs may be the organs which are chiefly engaged. Although cerebral disease is at present the principal source of danger in fever, it may not be so always. A change may take place in the character of the epidemic; the cerebral symptoms which are now of such frequent occurrence may become infrequent or inconsequential, and we may have the organic affections chiefly limited to the viscera of the thorax. I have seen many cases of fever in which the principal source of danger was connected with the chest, and where an accurate knowledge of the stethoscope was indispensable to a correct and successful plan of treatment.

Now when you have recourse to blisters in treating pulmonary affections, whether these affections be simple or complicated with typhus, it would be well to recollect that much good may be effected without leaving the blisters on for a long time, or until they rise fully; and also that when risen, it will not be necessary to cut them at once, and let out the effused serum. In treating the bronchitis of children, and in the bronchial affections of fever, I have frequently directed the blister to be left unopened; and I can state, from experience, that this plan answers very well. The effused serum forms one of the best dressings for the excoriated surface of the skin, and the formation of troublesome sores is avoided. I frequently have recourse to this mode of treating blistered surfaces in children, and persons of irritable habit, in whom the cutis is extremely tender and vascular. Such persons, when blistered, will often have profuse discharges, first of serum and afterwards of

sero-purulent matter, from the denuded surface, accompanied by torturing pain, loss of rest, and considerable irritation of the general system. I have seen the discharge continue to flow profusely for five or six days; in fact, to such an extent as to wet several napkins in the course of a day, and expose the patient to the risk of an aggravation of the pulmonary symptoms, in consequence of his linen becoming so frequently moistened as to require repeated shifting *. In all cases of children and persons of an irritable habit, I would therefore advise you to let the blisters alone, particularly where they have been applied to the fore part of the chest, or any other part not exposed to pressure or friction. As soon as the blister rises, apply over it a piece of lint, smeared with spermaceti ointment, which can be renewed as occasion requires, and leave the rest to nature. I was forcibly struck, some time since, with the difference of result between this and the ordinary practice, in the case of a young gentleman residing in Cambden-street, who had a severe attack of bronchitis towards the termination of fever. A blister had been applied to his chest in the morning, and another in the middle of the day. The first had been opened freely, and dressed in the usual way; but the other, which had risen about the time I was called in, was left untouched at my request. The one which had been opened caused such a degree of irritation and restlessness, that it was found necessary to give him an opiate every night; the other gave little or no inconvenience, and healed up much sooner. If I have done nothing better, I think I deserve some merit for being the first to reprobate the practice of keeping on blisters for twelve, eighteen, and twenty-four hours, and for having shewn, by numerous experiments, that a much shorter period of time was required to ensure the full effect of these remedies. When I commenced the practice of medicine, blistering was looked upon by most sick persons as one of the severest trials of their patience, and the agony which it caused in some irritable habits was almost insupportable. Blisters were left on for twelve, eighteen, and even twenty-four hours, and when at length they were removed, the whole epidermis of the blistered part came, or was torn, away, leaving behind a raw irritable surface, from which large quantities of serum and pus were effused for several days, to the great torture and inconvenience of the patient; and, not content with this, the practitioners of that time generally dressed the excoriated surface with some sharp stimulant ointment, so that the blistered surface most commonly resembled that of a severe burn. Ask those who are our seniors in practice, and they will tell you what blistering was twenty or thirty years ago. They first produced excessive irritation of the skin, by leaving the blisters on too long, they then irritated the denuded surface with stimulant ointments, and in this way brought on extensive sores of a bad character, which remained long after the disease for which the blisters were applied had disappeared, and which formed, in fact, a new ailment, requiring new medicines and additional attendance. If you look over Mr. Moore's account of the principal remedies employed in the practice of Dublin physicians, about the period I allude to, you will find that nothing was more common then than the application of stimulant and, as they were termed, digestive ointments, to blistered surfaces. I was among the first who assailed this barbarous treatment, and showed that all the good effects of blisters might be secured by leaving them on for a much shorter space of time. I proved by numerous experiments, that in many cases it was not necessary to leave them on more than four or five hours, in the adult *, and that they might then be removed and the blistered part dressed with spermaceti ointment. Under this dressing the blister rises well, and there is no danger of tearing away the cuticle, or producing an irritable sore. In addition to this, you entirely avoid the irritating effects which blisters are known to produce on the urinary organs. You will very rarely meet with dysuria, or hæmaturia, where the blister has been left on for the spaces of time I have mentioned.

Blistering is then to be used with the restrictions I have mentioned, and you will find it a most valuable aid in the treatment of fever and its complications. It may be employed either as a derivative and revulsive, or you may have recourse to flying blisters over various parts of the body, in certain forms of fever, where there is marked and sudden depression of the powers of life.

Speaking of depression of the powers of life reminds me of a curious incident, which occurred some time since in my practice, and which shows the value

* In pulmonary diseases, this continued discharge is often very useful, and should be encouraged; but in fever the production of such an effect from blisters must be avoided, as a surface thus denuded of its cuticle and inflamed, may be converted into a dangerous sore.

* Of course, blisters applied to the scalp must be excepted. They require at least twelve hours. In old persons generally the skin is much less vascular than during youth and middle age; and consequently, in the old, blisters require a much longer time to produce the required effect.

of being acquainted with the peculiar habits and idiosyncrasies of families. I attended, with Mr. Kirby, about three years since, a gentleman of middle age and active professional habits, who had been attacked with fever. I was first called to see him on the ninth day of fever, and found him apparently moribund. His pulse was intermittent and irregular, the action of the heart tumultuous, the respiration feeble, and the extremities cool. Mr. Kirby had instantly ordered internal stimulants, and blisters over the region of the heart and epigastrium. The patient rallied, and ultimately recovered. It is to be observed, that the group of formidable symptoms just enumerated had supervened quite out of the usual course, and without any previous warning. They were consequently not only alarming but unexpected. About a month afterwards, Mr. Smyly and I were called to see this gentleman's brother, who was living at Dundrum, and who was supposed to have caught fever from his close attention to his brother during his illness and convalescence. What was most remarkable in the case, was, that his pulse began to flag and intermit, and he likewise suddenly and unexpectedly got the same symptoms of depression of the vital powers on the very same day and hour as his brother. His symptoms also continued for the same length of time, and yielded, or spontaneously ceased, under the same plan of treatment. In some families you will find a very curious coincidence between the play of the various functions in disease as well as in health, and you should neglect no opportunity of making yourself acquainted with the family peculiarities and idiosyncrasies of your patients, as knowledge of this description is of the greatest value and importance in the treatment of disease.

ON THE FORCES

WHICH REGULATE THE

INTERNAL CONSTITUTION OF BODIES.

By O. F. Mossotti.

The following are only the popular preliminary remarks of Signor Mossotti: we have borrowed them from the "Scientific Memoirs," Part III. just published, by Mr. R. Taylor. The reader who wishes to study the body of the paper—a most important production, but wholly mathematical—had better procure the valuable periodical referred to.

The study of the phenomena of nature has led philosophers to consider bodies as being composed of molecules held in a state of fixed equilibrium at a certain distance from each other. Such a state requires that they should be endued with a certain action. Some peculiarities of this action we are already able to assign, but its complete characteristics are not yet well defined.

As the resistance opposed by bodies to compression increases indefinitely with the reduction of their volume, though their molecules have not come into contact with each other, it shows that the force which they exercise is repulsive at the least distances. At a distance greater than these, but still imperceptible, it must vary with great rapidity, and become attractive, in order that a steady equilibrium of the molecules may be possible; and finally, when it has become perceptible, it must decrease in the inverse ratio of the square of the distance, in order to represent the universal attraction. The limits of the distance at which the negative action becomes positive vary according to the temperature and nature of the molecules, and determine whether the body which they form be solid, liquid, or aëriform.

There is a class of phenomena, rather singular at first sight, in which, however, it appears that nature designed, by separating the forces which she employs, to present herself in all her simplicity. Such are the phenomena which constitute what we denominate *statical electricity*. It is well known with what admirable facility Franklin explained these phenomena, by supposing that the molecules of bodies are surrounded by a quantity of fluid or æther, the atoms of which, while they repel each other, are attracted by the molecules. It is known also how Coulomb subsequently proved that the force with which the repulsion of atoms and the attraction of the molecules are produced, is, like universal attraction, regulated by the law of the inverse ratio of the square of the distance. Indeed, the latter philosopher has substituted for the hypothesis of Franklin, which is that generally followed in England, Germany, and Italy, another hypothesis, in which a second fluid is supposed to perform the part assigned to matter in that of Franklin; and this mode of explaining the phenomena has been more generally adopted in France. It is even asserted that the latter hypothesis is the only one that should be received, inasmuch as it has been completely confirmed by the results of the beautiful analysis with which M. Poisson has begun to enrich the Memoirs of the Academy of Sciences. But they who put forward this assertion have not paid due attention to the fact, that, although this illustrious

geometer has, for the purpose of establishing his calculations, adopted the language of his school, the inferences drawn from them are not more applicable to the one hypothesis than to the other. He sets out, in fact, with the principle, that "If several bodies, being electric conductors, are placed in presence of each other, and attain a permanent state, the result of the actions of the electric layers which cover them, on a point taken anywhere in the interior of a body, must, in that state, be null; otherwise the combined electricity which exists in the point under consideration would be decomposed; but this is contrary to the supposed state of permanence." Now if for this principle the following be substituted: "If several bodies, being electric conductors, are placed in presence of each other, and thus attain a permanent state, the result of the actions of the layers of electric fluid which cover them, and of the exterior layers of matter which are not yet neutralized, on the electric fluid at a point taken any where in the interior of a body, must, in that state, be null; otherwise the electric fluid which exists in that point would be displaced, which is contrary to the supposed state of permanence;"—and if we interpret accordingly the literal denominations employed by M. Poisson and his equations,—all his results will be equally true on Franklin's hypothesis. In general, the action of the condensed electric fluid will stand for that of the vitreous fluid; and the action exhibited by the matter, in proportion as it is deprived of a quantity of its electric fluid, will stand for that of the resinous fluid. There is one circumstance, however, which makes a difference between the hypothesis of Dufay or Coulomb and that of Franklin: it is this—that, according to the one, the two fluids are moveable in the bodies, while according to the other the electric fluid is, but the matter is not, moveable. As the equilibrium, however, requires that we should only regard the relative position, the mobility of the electric fluid alone is sufficient for its establishment.

Æpinus, who has reduced Franklin's hypothesis to the form of a mathematical theory, was the first to remark, that if it be the requisite condition for the equilibrium of the electric fluids of two bodies, in their natural state, that "the attraction of the matter and the repulsive action of the fluid of the first body on the fluid of the second should be equal, and *vice versâ*," there are but three forces in operation; two of which are attractive, and but one repulsive. In other words, each of the two bodies attracts the fluid of the other, while the mutual repulsion of the two fluids constitutes only a single force, equal to each of the two attractive forces. If, then, with the equilibrium of the fluids, it is desired to find the equilibrium of the masses also, an equal repulsion must be allowed between the molecules; since the bodies would otherwise forcibly attract each other. But such an attraction is contrary to what we learn from experience. He felt at first a strong objection to the admission of such a repulsive force between the material molecules, as being opposed to the idea entertained of their mutual attraction, which was so clearly demonstrated on Newton's principles. But a little reflection satisfied him that this admission contained nothing that was opposed to facts, or, as he might rather have said, that was not confirmed by facts. Universal attraction itself may follow as a consequence from the principles which regulate the electric forces: for if we suppose that, the masses being equal, the repulsion of the molecules of matter is a little less than their attraction of the atoms of the æther, or than the mutual repulsion of the atoms themselves, this will be sufficient to leave an excess of attraction, which, being directly as the product of the masses and inversely as the square of the distance, would exactly represent the universal attraction.

While reflecting on these principles, in a course of lectures on natural philosophy which I gave at the University of Buenos Ayres, I conceived the idea, that if the molecules of matter, surrounded by their atmospheres, attract each other when at a greater, and repel each other when at a less distance, there must be between those two distances an intermediate point at which a molecule would be neither attracted nor repelled, but would remain in steady equilibrium; and that it is very possible this might be the distance at which it would be placed in the composition of the bodies. I thought the idea of sufficient importance to fix it in my memory, but did not at the time pursue its development further.

On my return to Europe I learned, through the reading of some memoirs, and in the course of conversation with men of science, that the attention of geometers was particularly directed to the molecular forces, as being those which may lead us more directly to the knowledge of the intrinsic properties of bodies. I was thus led to recall my ideas on the subject, and to set about subjecting them to analysis. The results of my first investigations I here submit to the judgment of philosophers.

I have supposed that a number of material molecules are plunged into a boundless æther, and that these molecules and the atoms of the æther are subject to the

actions of the forces required by the theory of Æpinus, and then endeavoured to ascertain the conditions of equilibrium of the æther and the molecules. Considering the æther as a continuous mass, and the molecules as isolated bodies, I found that, if the latter be spherical, they are surrounded by an atmosphere, the density of which decreases according to a function of the distance which contains an exponential factor. The differential equation which determines the density being linear, is satisfied by any sum of these functions, answering to any number of molecules. Whence it follows that their atmospheres may overlay or penetrate each other without disturbing the equilibrium of the æther. Proceeding in the next place to the conditions of equilibrium of the molecules, I observed, that for a first approximation (which may be sufficient in almost all cases), the reciprocal action of two molecules and of their surrounding atmospheres is independent of the presence of the others, and possesses all the characteristics of molecular action. At first it is repulsive, and contains an exponential factor which is capable of making it decrease very rapidly: it vanishes soon after, and at this distance two molecules would be as much indisposed to approach more nearly as they would be to recede further from each other; so that they would remain in a state of steady equilibrium. At a greater distance the molecules would attract each other, and their attraction would increase with their distance up to a certain point, at which it would attain a maximum: beyond this point it would diminish, and at a sensible distance would decrease directly as the product of their mass, and inversely as the square of their distance.

This action, possessing all the properties with which we can presume that molecular action is endued, is the more remarkable as it has been deduced from those forces only whose existence was already admitted by philosophers, and whose law is characterized by such extraordinary simplicity. When tested in the explanation of the varied phenomena which are proper to it, it must lead, in case of failure, to the exclusion of those forces from amongst physical principles; or, in case of success, establish their reality; and thus mark in a striking manner the admirable economy of nature.

To apply the formulæ which we have found, for the purpose of representing molecular action, to the phenomena of the interior constitution of bodies, requires methods of calculation which are not yet developed, and which must become still more complicated when the arrangement of the molecules, their form, and their density, are taken into consideration. I have thought it advisable, however, in consideration of the use to which it might be applied by able geometers, not to postpone the publication of this mode of viewing molecular action. It is a subject which appears to me entitled to the greatest attention, because the discovery of the laws of molecular action must lead mathematicians to establish *molecular mechanism* on a single principle, just as the discovery of the law of universal attraction led them to erect on a single basis the most splendid monument of human intellect, *the mechanism of the heavens.*

We mentioned that Professor Faraday, in his popular account of Mossotti's law, at the Royal Institution, quoted a passage written nine years ago by Dr. Roget, in which the probability of the existence of such a law is alluded to. The following is the passage: it occurs in the treatise on Electricity in the Library of Useful Knowledge:—

"(239.) It is a great though a common error to imagine, that the condition assumed by Æpinus, namely, that the particles of matter when devoid of electricity repel one another, is in opposition to the law of universal gravitation established by the researches of Newton; for this law applies, in every instance to which inquiry has extended, to matter in its ordinary state; that is, combined with a certain proportion of electric fluid. By supposing, indeed, that the mutual repulsive action between the particles of matter is, by a very small quantity, less than that between the particles of the electric fluid, a small balance would be left in favour of the attraction of neutral bodies for one another, which might constitute the very force which operates under the name of gravitation; and thus both classes of phenomena may be included in the same law."

EFFICACY OF THE STRYCHNOS NUX VOMICA IN AFFECTIONS OF THE DIGESTIVE ORGANS.

To the Editor of the Medical Gazette.

SIR,

IN a complaint occurring under so many and varied aspects, and not unfrequently bidding defiance to the best directed efforts of the practitioner, it will not, I think, be deemed an unprofitable ser-

vice if I shall have contributed in this brief communication any thing towards the more successful treatment of what has hitherto occasionally proved one of the opprobria of our art. Amidst the multiplicity of remedies with which the storehouse of our materia medica is at the present day so amply supplied (some of them, doubtless, of inestimable value, while others seem destined to possess a more ephemeral reputation), it becomes a gratifying part of our duty to endeavour to rescue from unmerited oblivion a therapeutic agent which has long been familiar to the medical world, but whose efficiency has been crippled by a too limited application of its powers;—I allude to the strychnos nux vomica. Very few, indeed, of the practitioners with whom I am acquainted are in the habit of employing this remedy otherwise than for the relief of certain forms of paralysis, where it has undoubtedly been productive of the most beneficial effects in some instances, as I have myself had occasional opportunities of testifying. In the valuable lectures of Mr. Pereira contained in the present volume of the Medical Gazette, a very cursory notice is taken of this drug with reference to its effects in disorders of the alimentary canal, although its application to the cure of paralysis is fully and ably discussed. In the "Pharmacopée Universelle," too, which contains a great variety of formulæ for its several modes of exhibition, little mention is made of its properties and uses further than as they may be rendered subservient to the removal of the graver affections of the nervous system, such as paralysis, epilepsy, chorea, &c. It does, indeed, appear from the same work that M. Niemann had successfully employed, in what he calls spasmodic cardialgia, a pill composed of one-fifth of a grain of the alcoholic extract of nux vomica. This statement, however, is merely made incidentally, and without any importance being attached to the exhibition of the remedy as a curative means in the above deranged condition of the system. With the view, therefore, of endeavouring to extend its utility to another class of disorders, less immediately interfering, it is true, with the continuance of life, but frequently, when unalleviated at an early period, paving the way for the encroachment of a long catalogue of organic changes*, that I am desirous of submitting these few remarks to the notice of the profession. The difficulty oftentimes experienced in the removal of dyspeptic ailments, and the consequent uncertainty attaching to each and all of the multiplied remedies which experience has proved to be alike in their turn available, must be generally admitted; and hence we are frequently doomed to witness the inefficacy of the most scientific treatment, whilst a cure is perhaps finally effected by the employment of some old woman's recipe. It is now several years since my attention was first struck with the very decided benefit resulting from the exhibition of this remedy in disorders of the digestive functions; and subsequent experience, which has certainly been ample, has tended only to confirm the confidence originally reposed in it. The cases in which it has been productive of the most decided benefit, are those of pyrosis, resulting from simple functional disorder of the stomach. In examples of this nature, indeed, I consider it almost a specific; so immediate, and in most instances so prominent, has been the relief obtained. I have the less hesitation in making this avowal, from having so frequently witnessed the almost total inefficacy of every means previously put in practice, and the patient consequently harassed with a vexatious disorder, depressing alike the energies of both mind and body. In pyrosis also, symptomatic of organic disease of the stomach, the powers of nux vomica are of essential service; although, of course, in this instance we can in general hardly expect to do more than regard the advances of those morbid changes which are going forward. It is not, however, for the removal of the above symptoms alone that I would restrict the employment of this remedy; although I believe, that in the subjugation of that symptom its virtues are more frequently and conspicuously manifested. In almost all cases of disordered digestion, unaccompanied with any inflammatory condition of the mucous membrane, and where the symptoms appear to depend upon a diminished vigour of the nervous and muscular powers of the stomach, as indicated chiefly by pain and distension after eating, acid eructations, &c.,

* See Dr. Wilson Philip's work on Indigestion, *passim*.

the tongue frequently exhibiting little or no fur on its surface, it may be prescribed with the fairest prospects of advantage. In a decidedly febrile state of the system accompanying the dyspeptic ailments, I should of course consider its use contra-indicated. But if we attentively consider the phenomena of indigestion, I am fully persuaded that in a larger majority of cases we shall be sensible of the impropriety of having recourse to any antiphlogistic measures; but on the contrary of the expediency of endeavouring to impart a greater degree of tone to an organ already suffering from diminished excitation. From the experiments which have been made with nux vomica upon animals generally, and upon man, it is established that its first effects, when given in moderate doses, are those of an active stimulant to the nervous system, without producing any marked influence upon the pulse; whilst, if given in larger doses, its effects are manifested "by a disordered state of the muscular system;" and if persevered in still further, tetanus and asphyxia are the result. But without further allusion to its various physiological effects, I shall merely add, that however energetic a poison it may in some instances have proved, I have never found its exhibition, even in tolerably full doses, productive of the slightest inconvenience, either when given in the form of powder, extract, or tincture. And this leads me to remark, that of the three modes of exhibition above alluded to, that of the powder appears to be by far the best, as its effects are far more uniform and certain: this may be given in doses of three, four, or five grains, suspended in cinnamon water, with mucilage, to which an aromatic, as the tinctura cardamomi comp. may be added, or, combined with a little calumba; and carbonate of soda, in the form of a powder, three times a day. If, as is usually the case, costiveness be present, this condition may be best obviated by continuing with each dose of the remedies above indicated, two or three grains of the pulvis rhei: if, on the contrary, diarrhœa be an accompanying symptom, this state constitutes no objection to the employment of the nux vomica, which may still be exhibited, in combination with chalk or opium, until the healthy action of the bowels be restored.

I have here purposely abstained from making any allusion to those auxiliary remedies, to whose efficacy in correcting the depraved secretions of the intestinal canal multiplied experience has borne the most ample testimony—such as the several preparations of mercury—my object being rather to direct the attention of practitioners to the singular value of a therapeutic agent, without the co-operation of which their curative efforts, however scientifically directed, will now and then be frustrated. In order, however, that the efficiency of this drug be duly exemplified, it is very important that the powder have been recently prepared, and free from all adulteration. With this view I have generally been in the habit of laying a strict injunction upon the druggist to supply me with a genuine article, offering at the same time a somewhat higher price to insure this object, many of the specimens which I have met with having proved, upon trial, to be almost worthless.

I am unwilling to occupy more of your space by detailing any cases in which I have found the above remedy so very serviceable, particularly as I trust, from what has been already said, the indications for its use will appear sufficiently evident. Before concluding, I must not omit to mention that the late Dr. Belcombe, of York, was in the habit of employing the nux vomica for the relief of indigestion, but in what particular form of this complaint I am not at present prepared to say. Mr. Wass also, of Thirsk, prescribed it in similar cases, without however, so far as I am aware of, attaching any very great importance to its exhibition. I am happy in being able to add the testimony of Mr. Fawdington, of this town, in favour of its remedial powers; the latter gentleman having, in the course of an extensive practice, enjoyed repeated opportunities of verifying its utility, especially in the removal of pyrosis.

It now only remains for me to state, that in advocating the claims of a truly valuable remedy to the notice of the profession, as adapted to a class of disorders in which it has hitherto been very rarely tried, I am impressed with a strong conviction that, unlike many fashionable remedies of the day, it is destined to hold a very high rank in the

scale of our remedial agents, an anticipation which I hope to see in part realized, by its admission into a future edition of the Pharmacopœia.

I remain, sir,
Your obedient servant,
THOMAS MELLOR,
Demonstrator of Anatomy at the Royal School of Anatomy and Medicine.

Manchester, Feb. 15, 1837.

CASE OF TYPHUS FEVER—CONCUSSION OF THE BRAIN—AND GORING BY A BULL.

To the Editor of the Medical Gazette.

SIR,

THE publication of some cases I recently sent you, has induced me to communicate the following, thinking it may be interesting to many of the readers of your excellent journal,—to some of whom it may resemble a biographical sketch rather than the simple detail of facts relating to the medical history of an individual in the lower ranks of society, and for the greater part of his life the inhabitant of a retired country village.

Soon after I commenced practice, I received an order from the overseer of a neighbouring parish to that in which I resided, to attend some families afflicted with fever. In one of the cottages (a miserable hovel, containing only two rooms, one above and one below, and both badly protected from the inclemency of the weather,) I found two young persons already dead; another in the last stage of typhus, who expired during the ensuing night; and three or four others in different stages of the same disease, who subsequently recovered.

Although I had never before seen such distress in private practice, I had witnessed the direful effects of typhus fever upon an extended scale, having been one of the medical attendants on the sick and wounded troops who returned to Plymouth after the death of their lamented commander, Sir J. Moore, at Corunna. The treatment I had recourse to I will not detail, as it might render my communication unnecessarily tedious; suffice it to mention, that in many respects it resembled that adopted by one of my excellent colleagues on that memorable occasion, and which he has so ably described in the fifth volume of the Edinburgh Medical and Surgical Journal.

One of my patients, who recovered, was a lad about ten years of age, named George James. The symptoms had been of an alarming character, and he had been considered to be in imminent danger.

A few months after his recovery, I was again called upon to attend him. He had fallen from a lofty tree, which he had ascended to take a rook's-nest; was taken up insensible, and in that state conveyed home. Upon examination, I could not discover any fractured bone, or any depression of the cranium. The dilated state of the pupil, and its incontractility on the admission of light, with other symptoms, denoted concussion of the brain; and I treated the case accordingly. The only sensibility he displayed, was taking into his mouth and swallowing what supplies of food or medicine were given him; and he was restless when necessitated to attend to the calls of nature. At first I gave him calomel and antimonials in combination, to which I added a strong infusion of senna, with small doses of the compound spirit of ammonia. When the pulse, which was at first feeble, increased in force and number, I had recourse to general and topical bleeding; at which times he would open his eyes and look about him, and then relapse into his state of insensibility. He continued in a similar state of torpidity, breathing without difficulty, and resembling any one in profound sleep, for above a week; when he gradually began to take notice, and at length to make inquiries respecting himself, having no recollection of any thing that had occurred after the branches of the tree had given way with him. He soon after regained his health and strength.

From this period I had no call to attend this unfortunate youth until he had attained the age of nineteen; but he had in the interim some narrow escapes, as he had connected himself with a gang of depredators who infested the neighbourhood; and, being detected in some burglaries, had sentence of death *twice* recorded against him, which was each time commuted for a term of imprisonment, on account of his youth.

On this occasion he had received a severe wound in the abdomen, from an enraged bull, which he had been occasionally in the habit of irritating; and being at work in the field where the animal was grazing, he commenced throwing stones, &c., when it closed upon him, and tossed him into the hedge. Fortunately for him, he fell on the opposite side, otherwise a second attack might have occasioned his death on the spot. He rose from the ground, with the intention of reaching the adjoining farm-house, but found that a considerable portion of his bowels were protruding through a wound occasioned by the horn of the bull; and, after calling for assistance, fell down, unable to proceed any further. In this state he was discovered and conveyed into the house. On my arrival, I found him reclining on a bed on the floor; his countenance pale, respiration quick, pulse small and very rapid, and a clammy coldness on the surface of the body, particularly of the extremities. The hæmorrhage had been very copious. Upon examining the wound, I found that it commenced about the centre of the right iliac region, and extended obliquely upwards, for five or six inches in length. The intestines were protruding in a considerable mass, equalling in size the head of a child eight or ten years of age, and consisted of nearly the whole of the colon, and at least two feet in extent of the ilium; but upon tracing them minutely, I could discover no other injury they had received, excepting a laceration of several of the mesenteric vessels, from whence the hæmorrhage had proceeded. The omentum, which appeared as if rent in several directions, was lying on one side. Having reduced the intestines, and extended the omentum over them as evenly as possible, I closed the wound, and secured its edges in contact with sutures, and straps of adhesive plaster; a fold of linen was laid over the dressing, and a band six or eight inches in breadth surrounded the abdomen, over which I directed a large compress to be applied, frequently wrung out of cold water. A degree of reaction taking place, as the pulse was increasing in force, I had recourse to venesection; and in this, as well as in the subsequent bleedings, was governed more by the effect upon the vascular system than influenced by the quantity of blood extracted. I directed his taking a solution of sulphate of magnesia every three hours, combined with small doses of the antimonium tartarizatum.

About seven hours after the accident I again saw him; his countenance was somewhat flushed; the pulse above 100, and full; the skin warm and dry; and the bowels had not been evacuated. I had again recourse to venesection, and directed a perseverance with the other means before recommended.

The following morning I found he had passed a tranquil night. The constitutional irritation, though somewhat increased, did not exist in any considerable degree; the tongue was covered with a white crust, and he complained of thirst; the skin was dry and hot; the pulse 110, and increased in hardness; the bowels had not been relieved, although he had voided his urine several times, and the surface of the abdomen betrayed an increased degree of tenderness. I bled him again, and directed a grain of calomel, and the same quantity of antimonial powder, to be taken every four hours, and a dose of a saline cathartic mixture in the intermediate time, and likewise the administration of the common domestic enema every four or six hours, with the repetition of the application of cold externally.

A call to a particular obstetrical case prevented my seeing him until the following morning (forty-four hours after the accident). I found him apparently in a hopeless state; his countenance was deeply flushed, and displayed a complete personification of anxiety, his sight being directed from one object to another in quick succession; he had been delirious at intervals during the night, a troublesome hiccup distressed him, and he had vomited several times. The skin was dry, and parched with heat; the tongue covered with a dark brown coating; the pulse very irregular in force and number, but averaging about 150 per minute; and the abdomen felt tense, and was excessively tender, as the slightest touch gave him severe pain. He told me he should die, and thanked me for the attention I had shewn him on this and former occasions. I directed an occasional dose of ol. ricini, which I subsequently found his stomach retained; the enemata to be continued, injecting a solution of sulphate of soda in strong infusion of senna, and to repeat the application of

cold water to the abdomen as frequently as could well be effected.

On my seeing him in the evening, he exclaimed with animation, "I am better, sir." His countenance was expressive of less anxiety; his skin felt softer, was cooler, and disposed to a gentle perspiration; the tongue was whiter and cleaner; the pulse regular, though much too full and quick; the other symptoms more favourable; and the bowels had been relieved several times. I directed the continuance of the cold applications, and the repetition of the oleum ricini, with his taking plentifully of whey and soft gruel, the only articles of diet he had taken since the occurrence of the accident. I had likewise recourse to another bleeding, abstracting the blood to a greater extent than at any time before.

The following morning I was gratified by finding considerable amendment. The pulse was about 90; the temperature of the skin lessened, and it was bedewed with a gentle perspiration; the abdominal tension was nearly gone, and the wound (which I now examined for the first time after closing it,) presented a favourable appearance. Several evacuations had taken place during the night. From this time the symptoms continued to improve, and my patient gradually recovered. On discontinuing my attendance, I ordered his wearing continually a wide band or belt, by way of support and protection; and also cautioned him to be attentive to the state of his bowels, carefully avoiding a state of constipation, and whatever would be likely to occasion irritation.

A few months after his recovery he left the neighbourhood for London, where he married and resided three or four years; when he again returned to his native place. Some time afterward I received an urgent request to visit him as expeditiously as possible. I went immediately to his house, but he had expired before my arrival. He had suffered extreme pain in his stomach and bowels, with great sickness and relaxation. The abdomen was somewhat distended and tense, but the body did not present any external appearance of injury. I left the house, saying I should call the next morning to make a further examination of the body. Meantime it was reported he had been poisoned by his wife; and the following morning I was requested to attend a coroner's inquest, who were assembled to investigate the affair. I went accordingly to meet the coroner and jury, and having stated what I knew of the case, proceeded thence with my assistant to examine the body.

Upon laying open the abdomen, the intestines appeared extensively inflamed, but more so on the right side than on the left, the mesenteric vessels being full or distended, and the peritoneum reddened in several parts. At the part where he had been wounded by the bull there was a deficiency of the peritoneal lining of the abdominal parietes, the internal parts being simply covered by an expansion of integument, for an extent of five or six inches in length, by two or three in breadth. We removed the stomach and duodenum, with portions of the intestines, and examined their contents; and being unable to detect any poison, we called upon the coroner and jury to request their adjournment till the following day, in order to allow us time for a deliberate examination by tests, &c. We conveyed the stomach, &c. home; and after a minute examination by tests, and employing every method of analysis for the detection of poison, as recommended on such occasions, without success, we made our report to the jury, who, without much hesitation, returned a verdict of—"Died by the visitation of God."

The only account given by the wife relative to the sudden illness of the deceased, was, that he had gone to work at a stone-quarry without wearing his belt, and that he had drank a quantity of cider, a beverage to which he was unaccustomed.—I am, sir,

Yours very respectfully,

J. F. Hulbert.

6, Trinity Square, Southwark,
Feb. 7, 1837.

TREATMENT OF HYDROCELE BY IODINE.

To the Editor of the Medical Gazette.

Sir,

The following observations exhibit the good effects produced by iodine in a case of hydrocele, no other remedy having been ever employed for the cure of the disease in this patient.

I had intended to have transmitted this case for your notice soon after the cure had been accomplished. I could not, however, at that time give an account of any other similar case in which the effects of iodine had been established; since that period I can bear testimony to the same favourable result in two other cases; and at this present time I have another case (which has existed for the last seven years), under similar treatment, doing well. I have had my attention drawn to this particular case (the account of which I now have the pleasure of forwarding to you), from having the same patient at this time under my care, he having recently met with an accident, the consequence of which has been phlegmonous erysipelas of his right hand and arm. It is more than sixteen months since he was cured of the hydrocele, and he has not experienced any symptoms of its return.

I consider these facts worthy of remark; and if you coincide with me in this opinion, perhaps you will find space for them in your journal.

I am, sir,
Your obedient servant,
CHARLES CASWALL.

18, Woburn Place, Russell Square,
Feb. 21, 1837.

William Soper, æt. 58, a stout robust man, employed by Messrs. Tyler and Co., the extensive coppersmiths in Warwick Lane, became a patient of mine on the 4th of June, 1835, with a hydrocele about the size of the egg of an ostrich. The fluid had been accumulating for the previous twelve or thirteen months, and was perfectly transparent. No remedy whatever had been employed to remove it, neither had any but the operation of tapping been suggested; and to this the patient was greatly averse. I therefore recommended him to pursue the following treatment:—

June 4th.—℞ Pulv. Jalapæ, gr. xij.; Hydrarg. Submur. gr. iij. M. cras mane.

6th.—℞ Ung. Potass. Hydriod. ʒj.

This portion of ointment to be rubbed into the scrotum every night and morning, and at all other times some of the ointment to be spread on lint and applied around it (the scrotum, of course, to be constantly suspended in a bandage.) The ointment was composed in its proportions, of one drachm of the hydriodate of potash to one ounce of hog's lard.

11th.—Rep. Ung. et Pulv. Cath.
16th.—Rep. Ung.

℞ Træ. Iodinæ, ℥xx. ter quotidie ex Aq. Distill. ℥iss.

23d.—Rep.
July 2d. — Tinct. Iodinæ, ℥xxx. ut antea sumend.
11th and 21st.—Rep.
Aug. 1st, 13th, and 25th.—Rep.
Sept. 3d and 12th.—Rep.

Oct. 3d.—Cured.

The patient was considered quite well on the 12th of September, but he was desirous of continuing the same remedies for a short time longer; he has desisted employing them, however, since the 3d of October. The treatment of hydrocele by tapping and subsequent injections is not at all times unattended by danger. I witnessed on one occasion death ensue in consequence of this treatment, at St. Bartholomew's Hospital. I am not aware of any ill effects succeeding to the use of iodine in this disease, which can be in anywise attributed to its employment.

P.S.—I dated this communication as if written on the 21st of this month, not intending to send it to you till that day. It was written, however, yesterday (Feb. 17th); and it is somewhat singular that, in perusing your GAZETTE of this day, I find two letters, one from Mr. Keate, and another from Mr. Lewis, on the treatment of hydrocele by puncture. Perhaps the mode of treating this disease as here prescribed, may supersede that of puncture.

Feb. 18, 1837.

A COMBINATION OF PATHOLOGICAL STATES,

OCCURRING IN ONE AND THE SAME INDIVIDUAL.

Hydatids and their Origin.

To the Editor of the Medical Gazette.

SIR,

I SEND you the following case for insertion, if you think the variety of morbid appearances co-existing therein sufficiently curious to merit a place in your journal.

John Kemp, æt. 68, labourer, was admitted into the Birmingham Dispensary

in October last, with fever, yellowness of skin, pain in right hypochondrium, and cough—in short, with the usual symptoms of acute hepatitis, for which he was bled with leeches to the anus, and over the side, with great relief. Still the pain and tenderness, though lessened, were not removed, and the cough continued unabated, with great dulness on percussion, over the lower part of the right side, and with absence of the respiratory murmur. Similar attacks recurred frequently, and were relieved by the same means; but as the cough on each occasion became worse, though there was no decided crepitation, nor were the sputa mixed with blood, I changed the diagnosis from hepatitis to pneumonia. The last attack occurred about three weeks ago, with intense pain and tenderness over the whole side; urgent dyspnœa, so that he could not lie down; dulness on percussion over right side of the chest, with absence of respiratory sound, and ægophony opposite the middle lobe, and puerile respiration over the left side. The sputa were rusty, and very viscid. He had leeches to the side, and took Ant. Tart., and the next day the subcrepitant or mucous rattle was heard over the front and upper part of the right lung, below which, behind, the ægophony continued, and below that, all was dull. In a few days afterwards, the ægophony had ceased, and nothing but a mucous rattle was heard at the upper part of the lung, before and behind. From this time his strength gradually failed, and he died on the 9th inst., after a violent attack of dyspnœa, his side continuing very tender to the last. Some years ago he had a paralytic attack that affected the muscles of the right side of the face, so that he had no power to close that eye, which remained wide open even during sleep, and was unable to whistle or blow, the cheek being quite flaccid; and for some time before his illness, his appetite had failed, and he had some difficulty in swallowing, and often vomited his food, which gave him great pain. During his illness, and particularly towards the close, his urine was very scanty, and nearly ceased for a few days. He always lay on his right side.

Sectio cadaveris, seventy-two hours, P.M. — Body not greatly emaciated; chest barrel-shaped, as usual in persons of his age, but more prominent in front, from the absence of flatus in the intestines. Upon raising the sternum and false ribs, the former broke off below the clavicles, and exhibited its cancelli, filled with a bloody purulent fluid, which also was observed in the ribs, which were extremely brittle, and easily cut with the cartilage knife. The right side of the chest was quite dull on percussion. The sternum having been removed, a large substance was found occupying the right side of the chest, and projecting downwards as far as the kidney that adhered to it. It was covered at its upper and front part by the condensed and flattened lung, and at the lower portion by the right lobe of the liver, which, from the thickness of about an inch at the fissure, was thinned and flattened out over the tumor, till at its edge it was only $1\frac{1}{2}$ inches thick; the middle portion was covered by the adherent pleura and diaphragm. Not being able to remove the contents of the chest in consequence of their firm adhesions to the tumor, I opened it, when out flowed a quantity of hydatids, which, when all collected, filled a common wash-hand basin. They were of all sizes, from a turkey's egg to a grain of sand, and contained either a yellow or a limpid fluid. In many that were not burst, smaller ones, containing the yellow fluid, might be seen floating about with shreds of the lining membrane. They were all ovoid or globular, and without pedicles, but some were spotted on their surface with a single opaque spot. The large were grey and opaque, the middle sized transparent, and the smallest yellow, the colour of oil. The cyst being removed, was found to be formed by the peritoneum below, and by the diaphragm and pleura above, consisting externally of a dense laminated membrane, 1-8th of an inch thick, covered internally with plates of calcareous matter, from one to three inches in diameter, and lined with thick layers of condensed lymph. The right lung was not so much condensed as to sink in water; and between its lower edge, all round, and the cyst, was a layer of lymph opposite the part where ægophony was heard, and extending forwards to the pericardium. In the cells of this lymph were a number of hydatids, exactly similar to those contained in the cyst. The left lung was hypertrophied, and rather emphysematous, and the bronchi of both sides were inflamed and

clogged with mucus. The heart was natural, and contained some ante-mortem clots. The aorta was ossified half an inch square at the arch, with commencing ulceration and dilatation.

The stomach was large, and, about four inches from the pylorus, at the lesser curvature, was a round elevated ulcer, with sharp edges, 1-4th of an inch thick; the bottom being formed by the hypertrophied transverse muscular fibres. There was another ulcer close by, which had not perforated the mucous membrane, and was covered with pus; and another in its commencement at the pylorus, which was much thickened. The mucous membrane was generally congested and thickened, but not softened. The left lobe of the liver was twice its usual size, and lay in the left hypochondrium. It had the nutmeg appearance, but there was no difference in the texture of the two lobes. Both the liver and lungs were friable. The middle portion of the right kidney was softened, mottled, and had lost its tubular state. The left was healthy, but was compressed by the liver into a triangular shape. The spleen was healthy. The intestines and brain were not examined.

Upon further inquiry, I ascertained that the patient had been subject to pain in the right side for thirty years, and, about fifteen years ago, had broken one of his ribs on that side. The paralysis of the seventh pair came on suddenly one cold night, while he was going to his club, and was unattended with any apoplectic symptoms.

Upon a close examination of the hydatids, I found that the major part were collapsed and empty, but entire. The largest consisted of three coats easily detached from each other, and contained numerous smaller hydatids, and atheromatous matter, besides a number of minute yellow cysts, the walls of which were composed of cholesterine, coloured by the yellow fluid within; which, at a cursory view, I had previously mistaken for a gelatinous matter. I established the fact of the unbroken state of the empty hydatids, by piercing them with a blow-pipe and inflating them.

As the foregoing case exhibits a coincidence of a great variety of pathological states, and appears to me to add somewhat to our knowledge of the obscure subject of the degeneration of tissues, I venture to append the following remarks.

All the authors I have consulted upon the subject of hydatids, describe them as containing a limpid fluid, colourless, or yellow, when the liver is the seat of disease; and Cruveilhier, whose account in the *Dict. Pratique* is by far the most complete, says that they are always included in a parent cyst, which lines the dense and fibrous one that is formed around them. He also rejects entirely the notion that they owe their origin to inflammation. In this case there were very few, out of some thousands, that were not empty, or nearly so; indeed, had they been full of fluid, the sac could not have contained the tenth part of them: besides that, they were carefully ladled out with a saucer, and their integrity was proved by the blow-pipe. There was no "mother cyst," and all the larger cysts contained atheroma, and so much cholesterine that the fingers were spangled over by it, and felt greasy after touching them. Not having an opportunity of consulting their works, I cannot say upon what grounds Vitel and Jager support their opinion of the inflammatory origin of hydatids, nor does Cruveilhier mention them; but in none of the numerous cases quoted by him is there reason to believe that the disease was of recent occurrence, nor is the recent effusion of lymph in the part ever mentioned. Yet, in the case above, although the first deposition of hydatids was probably referrible to the injuries sustained many years before, the second (indicated by the acute pleuropneumony, with effusion of fluid and lymph, as diagnosticated by auscultation and percussion,) could not be considered to be of older date than the last attack, three weeks before the death of the patient. The lymph occupied the most dependent part of the right pleural cavity, and was quite soft and flocculent, having all its arcolæ filled with hydatids of a small size, very few of which contained any fluid. All these circumstances are in favour of the recent production of the hydatids; and this idea is borne out by a comparison with Mr. Sherwin's case, in vol. xix. of the Edinburgh Medical and Surgical Journal. In this case, the tumor was punctured several times, at about a week's interval, and Mr. S. remarked, that after the first two evacuations of the contents, the hydatids were much

smaller, though almost as numerous as before; and therefore he concludes that they had been formed between the operations. This is the only case I have been able to find in which the date of the origin of the hydatids can be fixed within any certain limits; except one which occurred in my own practice, where the patient began to expectorate hydatids just two months after two acute attacks of pneumonia, with intercurrent pericarditis, which occurred during salivation, and left a permanent bellows-sound. In this instance, also, the cysts were collapsed and empty, and admitted of inflation. A quantity of pus, but no serous fluid, was expectorated with them. From Mr. Sherwin's and my own two cases, therefore, I should conclude, in opposition to Cruveilhier, that inflammation has considerable influence upon the production of these parasitic animals, and that there may be an hydatid as well as a cancerous or scrofulous diathesis, &c. This brings me to the other interesting points of this case, —viz. the deposition of calcareous matter in the cyst, the cancer of the stomach, and the existence of Bright's disease in the kidney. But as I have already trespassed considerably upon your columns, I will leave the consideration of these morbid states to another occasion.—I remain, sir,

Your obedient servant,
T. Ogier Ward, M.D.
Physician to the Birmingham Dispensary.

Birmingham, Feb. 12, 1837.

FRENCH MIDWIFERY PRACTICE.

To the Editor of the Medical Gazette.

Sir,

In looking over my note-book of last year, I find a few remarks which may possibly interest those of your readers who practise midwifery, as showing that there still exists a considerable difference between our practice and that of our continental friends, particularly as to the kind of instruments used in delivery, and the manner of employing them.—I am, sir,

Your most obedient servant,
George S. Lilburn, M.D.

24, Harley Street,
Feb. 23, 1837.

Rouen.—The Hôtel Dieu, in this city, contains 600 beds. One ward is appropriated for women during their confinement, who are admitted by the physician, and kept as long as he thinks judicious (generally one month). The woman, when in labour, is taken into a small room, and there delivered on her back, with the head and shoulders a good deal raised, in the presence of the pupils. Immediately after delivery she is carried to a room appropriated for her reception, and the infants to one adjoining. In that for the latter their little beds are arranged round the room with canopies; they are dressed in swaddling clothes, confined all but their arms. One woman had been delivered the day before I arrived with forceps (Baudeloque's). She had lacerated perineum, and laceration through the vagina into the rectum. The Interne, who accompanied me round the hospital, and very politely explained the whole progress of the case to me (bringing me specimens of the instruments then in use), said, that the accoucheur, in employing the forceps, although a very powerful man, and exerting the whole of his strength, had the perspiration running down his face, and was more than an hour in extracting. The ergot had been previously given, and the patient bled largely.

I remarked that the mischief might probably have been avoided by the patient lying on her left side, and by the use of the curved forceps, invented by Dr. Osborne, and modified since his time, as there was no deformity of the pelvis.

He told me that perforation of the head of the child, when necessary, was effected with a long sharp-pointed bistoury, and the brain removed principally by the operator's fingers!

Paris.—The Hôpital de la Maternité, for the reception of women, married or unmarried, during their confinement, who are attended gratuitously. No *male* pupils are allowed in the house. This establishment is intended for the instruction of "Sages-Femmes pour tous les Départemens du Royaume." The patients may keep their children, or, if they prefer it (no rare occurrence), send them to the Hôpital des Enfans trouvés. Five of these unfortunates were being sent when I first visited the hospital. They were enclosed in a sort

of partitioned box, with a high lid, and a blanket over each. The infants, when not sent away, remain in the same room with their mother, but in separate beds, with canopies; those of the latter without.

The physicians are—

Mons. Dubois, Méd.-en-Chef.
— Moreau, } Médecins.
— Jerardin, }
Mde. Le Grand, 1re Accoucheuse.

There were 96 female pupils, who remain from one to two years in the house. Mons. Dubois gives them clinical lectures and examinations; and from the great reputation of this accomplished physician, his instruction must be valuable. Mde. Le Grand lectures every day on the theory and practice of Midwifery, and the Pharmacien-en-Chef twice a week on Botany. Patients may get out of bed the fifth day, and the ninth day may sit up. For the first five days after confinement, if every thing goes on well, and the woman suckles her child, she is allowed, per diem, 2 pints of soup, 1 ditto potage, and 1 ditto bouillon at night; after the fifth day, meat and wine. Women are admitted as patients at all times before labour, night or day, without recommendation. Madame Le Grand employs the forceps when requisite, and all the pupils are taught to bleed and vaccinate. Fifteen grains of the ergot is the common dose, and Mons. Dubois only is allowed to give it.

In 1000 patients the instruments are used about 40 times.

I was indebted for my admission to the hospital to the politeness of Mons. Jourdan, Inspector-in-Chief of Hospitals.

A FEW REMARKS ON MOLLUSCUM; WITH TWO CASES OF MOLLUSCUM NON-CONTAGIOSUM.

By Walter Dick, M.D.
Formerly House-Surgeon to the Glasgow Infirmary.

Dr. Bateman, who was the first to particularize Molluscum, has described two varieties of it, apparently little allied to each other—the Molluscum contagiosum, and the Molluscum non-contagiosum. Notwithstanding his acknowledged acumen in observing and diagnosing cutaneous diseases, Mons. Rayer is of opinion that the two cases, which he details as instances of contagious molluscum, were nothing else than a diseased state of some of the sebaceous follicles. It is much more probable, however, that Bateman was correct, in viewing them as cases of a distinct disease; and this view has subsequently been strengthened by Dr. Carswell, who (as we learn from Cazenave and Schedel) had an opportunity of observing a case in every respect analogous to those described by Bateman. It occurred in a child, to whom the disease seemed to have been communicated by his brother, who had received it at school from one of his companions. The child died; and as the nature of the disease is altogether obscure, it is unfortunate that Dr. Carswell, so justly distinguished for his pathological researches, was not permitted to examine the structure of the molluscous tubercles.

This variety of the disease is characterized by sessile tubercles, seldom larger than small beans, which, according to Dr. Bateman, discharge a small quantity of milk-like fluid on pressure, from minute orifices in their summits. This fluid he presumes to be the medium of contagion.

The non-contagious molluscum is characterized by tumors of various sizes, some of them as large as a hen's egg, or larger even. This variety of the disease does not seem to have been observed by Bateman. As an instance of it, he alludes to the remarkable case described by Professor Tilesius*. One of the cases which we have met with was so similar to it, that the plates which Tilesius has given of his patient would, with a few trifling alterations, exactly represent ours; and we think ourselves fortunate in having had an opportunity of examining the texture of the tumors.

Dr. Bateman states that molluscous tubercles contain atheromatous matter. He does not seem, however, to have had any warrant for saying so; and we have ascertained that such is not the fact, in

* Historia Pathol. Singularis Cutaneæ Turpitudinis. 1793.

non-contagious molluscum at least. Hitherto, so far as we are aware, no anatomical description of the disease has been made public, unless, with M. Rayer, we suppose the disease, which M. Velpeau has described under the title "tumeurs spéciales de la peau," to have been molluscum, which it does not seem to have been.

It is probable that several dissimilar diseases have been described under the title molluscum, as is generally the case with complaints of infrequent occurrence. And some may perhaps say that the cases given below are not instances of molluscum. However, as Dr. Bateman has applied that term to the disease described by Tilesius, and as we find that our cases, particularly the first, agree so exactly with it, we think that they may with propriety be ranked under the same name, although, at the same time, we are of opinion that the disease cannot, without grossly violating cutaneous nomenclature, be ranked as a tubercular disease. Rayer has done right in removing it from the Tubercula, and placing it with those diseases which he comprehends under the head of "vices de conformation de la texture."

Our first case occurred in a Highland woman, unmarried, aged 36, a native of Skipness. She was admitted into the Glasgow Royal Infirmary, in September 1834, more as an object of curiosity than from any prospect of her being benefited by medical treatment. Her case was entered by me in the hospital journal. Her state on admission was as follows:—

Face is thickly studded with tubercles, varying in size, from a barley-corn to a small bean, of a round or oval form, with broad bases, and of the colour of the surrounding skin. Some of them are slightly transparent, so that they have some resemblance to bullæ at a distance. They feel soft, and most of them can be pressed nearly level with the surrounding skin, but immediately rise again when the pressure is removed. On left eye-brow there is a very prominent one, of the size of a Spanish nut; it feels firm, and is of a light-red colour. When cut into (which was done to ascertain its structure), nothing but blood flows from it. This is the case with some of the others which were similarly treated. They all appear to be solid.

Scalp presents a furfuraceous appearance, from chronic eczema. The tubercles of face are influenced by the state of this eruption, becoming rather larger when it becomes more active or irritable; they then occasionally discharge a little watery fluid, but not from visible orifices. There is a solitary tubercle, about the size of a pea, on centre of palate, covered with healthy mucous membrane.

At vertex capitis there is an elevation of the scalp, denuded of hair, of the size and shape nearly of an ordinary-sized watch. Over anterior part of sagittal suture is another similar protuberance, but rather smaller. Both have a tense elastic feel, as if they contained matter. This, however, on puncturing one of them, is found not to be the case.

Scalp over origin of trapezii muscles is a good deal thickened, hard, and intersected with pretty deep transverse rugæ. Has some uneasiness in this part. Neck and trunk of body, both before and behind, but particularly the back, are covered with an almost countless number of tumors. On the neck they are small; on the shoulders and upper half of back they vary in size from a pea to a pigeon's egg. A few of them have narrow necks, and are slightly pendulous; the rest have broad bases, and are of a semi-spherical appearance; some are soft, others rather hard to the touch. They have all more or less a reddish appearance. On lower part of back and haunches they are very numerous, and fully larger than those above, but possessing the same appearance.

On breast and belly the tumors generally are not quite so numerous as on back, and feel softer. Attached to inside of left mamma there is a pendulous one, of a pyramidal form, nearly the size of the fist, soft, and somewhat flaccid, containing a congeries of small pea-like bodies, apparently the lobules of the mammary gland enlarged.

Lower extremities below upper third of thighs are free of tumors. On upper extremities they are pretty numerous, and about elbows and wrists unusually large. One over lower extremity of left radius equal in size to a goose-egg, and has a soft spongy feel; the others vary in size, from a walnut downwards.

There is a vesicular eruption, of an eczematous appearance, over body, which has existed for two years back.

With the exception of tingling pain and itching from it, and the occasional uneasiness felt in tumors on head, she feels well. The tumors on trunk and extremities give her no uneasiness.

Her hue of skin is naturally dingy. General health good.

Her parents are healthy Highlanders, and none of her relations have been affected with any similar complaint.

All the tumors, with the exception of those on face, have existed since birth, and have gradually increased to their present size. The tubercles on face appeared between five and six years ago; for the last two years they have been stationary.

As it was deemed of importance to ascertain the structure of the tumors, she was persuaded to allow one of them to be removed. One, about the size of a walnut, on lumbar region, was selected. An elliptical incision was made, and tumor, which was attached to the subcutaneous cellular tissue, without any distinct cyst, was dissected out, its base requiring to be divided with the scalpel. The wound, after a slight attack of erysipelas, healed kindly.

On examining tumor, skin covering it was found firmly united by subjacent tissue. It was not thickened, and its texture seemed normal. The substance of the tumor itself seemed firm and solid. A section of it showed that it was composed externally of dense cellular tissue, of a light colour, resembling in some measure fibrous tissue. More internally, its structure was less dense, and appeared merely cellular tissue, with a little fatty matter. In fact, the tumor appeared to us to be a sort of hypertrophy of the subcutaneous cellular and adipose tissue.

This poor unfortunate woman, after remaining a week or two in the hospital, was dismissed in same condition as when admitted, excepting the eczematous eruption, which was cured by appropriate treatment, prescribed by Dr. Burns, under whose charge she was.

With respect to the tubercles on the face in the above case, it may be doubted by some whether they were the same in structure as those seated on other parts of the body. We have not had an opportunity as yet of seeing the Grecian elephantiasis, but, judging from the descriptions given of that disease, the facial tubercles of our patient did bear some resemblance to those which characterize that disease before it has made great progress; and had the tumors on head, and thickening of scalp at nape of neck, appeared simultaneously with them, we might have been inclined to believe that our patient had elephantiasis superadded to her molluscum. But when we know that the tumors and thickening of the scalp long preceded the tubercles on the face, we are led to think that the latter ought to be considered in their nature the same as those seated on the other parts of the body.

The second case occurred in a woman between 30 and 40 years of age, who was admitted with paralysis shortly after last patient. On her breast, shoulders, and back, there was a considerable number of tumors, varying in size, from a pea to a filbert; some of them a little larger. They felt soft. Some had broad bases, but the majority were pendulous, with narrow necks or pedicles. They generally were of the colour of the surrounding skin. A few small ones of similar characters on scalp, and one or two on side of face. They had existed from birth.

She died a few days after admission of the head affection for which she was admitted; and an opportunity was thus obtained of examining the structure of the tumors which were scattered over her body

Their structure was found very similar to those of last case; and to be more particular in their description, would be just to repeat what we stated respecting the previous ones.

As already stated, the first of these cases bears an exact resemblance to the one described by Professor Telesius. We may shortly notice a few of their more remarkable coincidences. In the German's case, as in ours, there was a large tumor extending, as he says, "ex scrobiculo cordis et a processu zyphoideo sterni usque ad regionem umbilicalem." It was purse-shaped ("marsupiformis.") In our patient we remarked that the tubercles on the face at times became irritable, and discharged a little watery fluid. In Tilesius's case something analogous to this occurred, but at more regular intervals: generally every month, he states, some of the tumors were attacked with sense of formication, and on friction "humor quidam acrimoniosa lympha infectus effluat." On the head of this patient there was a

tumor of the same appearance as those which our Highlander had on her's. He, too, was born with the disease, of healthy parents.

Tilesius did not ascertain the structure of the tumors, as the man (perhaps wisely enough) would not consent to have any of them either punctured or excised. We have no doubt, however, that if they had been examined, they would have been found such as we have described, and not atheromatous, as Bateman, and some other authors, unadvisedly affirm. "The disease," says Tilesius, "a lympha trahit originem." This statement does not seem either very satisfactory or intelligible. Its etiology is altogether obscure. May not these congenital humours depend upon some modification of the "nisus formativus?" Will the transcendentalists be able to throw any light on this subject?

The above cases, in a practical point of view, are of no value, but as they may prove interesting to those who are especially engaged in the study of cutaneous diseases, and perhaps also to the general pathologist, we have been induced to record them.

Glasgow, Feb. 1837.

ERYSIPELAS;

ITS NATURE AND APPROPRIATE TREATMENT.

To the Editor of the Medical Gazette.

Sir,

Dr. Fordyce, Dr. Wells, and the subsequent physicians of St. Thomas's Hospital, were, I believe, among the first to establish by many striking instances that erysipelas was propagated by contagion. This doctrine has received much valuable support from Dr. Cullen, Dr. Baillie, and from many other quarters, and is now universally admitted by the medical officers of this institution, and I think I may venture to assert also, by the majority of the profession in this country. As this subject involves important consequences, it is not perhaps unnecessarily multiplying facts in proof of the highly contagious nature of this disease, to mention a few cases of recent occurrence.

Ann Verdon, aged 64 years, was admitted into Dorcas ward, on the 9th of June, 1836, with indolent ulcers of the leg. In the adjacent bed there was a patient convalescent from an attack of erysipelas, which had commenced on the 24th of May. On the morning of the 19th of June, Verdon was attacked with erysipelas of the face. The disease followed its usual course, and lasted about five days, extending to the head, neck, and shoulders, while the constitutional symptoms ran high. She was successfully treated by wine, and from my notes I find that the cuticle of the affected part was desquamating, and she was completely convalescent on the 26th. As the general health of this patient, at the time of her admission, was good, I apprehend no doubt can exist of the disease, in this case, having been occasioned by contagion.

Philadelphia Rason, aged 50 years, whose thumb had recently been amputated in Dorcas ward, whence she was removed to Naples ward on the 3d of May, at the opposite extremity of the hospital. In this latter ward erysipelas had prevailed for some time, and she remained there until the 11th, when she returned to Dorcas ward. On the 29th, without having been exposed to any fresh source of contagion, she was attacked with erysipelas of the face, which spread rapidly over the head and upper trunk, attended with much constitutional excitement. This patient was also put on wine, and the case terminated favourably about the fifth day.

Two other patients also who were removed with Rason from Dorcas to Naples ward, likewise on their return to Dorcas fell ill of erysipelas within two days of the case recorded; they were similarly treated, and with the same happy result. I presume, therefore, that the three last cases must have been infected in Naples ward, and that the period which elapsed from the time of their leaving Naples ward to the appearance of the disease, is quite explicable on the ground of the latency of the poison.

The number of instances which are thus fast gathering around the doctrine of the contagious nature of erysipelas, have satisfied my mind that it is founded in truth; and I am equally convinced, from all I have seen, that it follows as a necessary consequence that bleeding is the exception, and not the rule of treatment of the class of diseases to which it belongs. But although vene-

section may not be the rule of practice, it does not result that a tonic plan is necessarily successful. I have on this account been induced to pay much attention to the cases of erysipelas treated during the last year in St. Thomas's Hospital, and I apprehend that in the following facts the most sceptical mind must find strong reasons for believing that the tonic treatment, if it still leave something to be desired, is certainly the most efficient of all the modes yet received by the profession.

From January to June inclusive of last year, thirty-two cases occurred in this hospital which were treated by wine, either alone, or combined with tonics, from the first appearance of the disease, and all, except two, recovered; of the two that died, one, in consequence of her late admission into the hospital, did not receive any treatment until a late period of her attack, and rapidly sunk; while the other was a woman far advanced in ovarian dropsy, and considerably emaciated, so that her life must have closed in a few weeks, had she not sunk under the severe form of erysipelas with which she was seized. At the time the above cases were treated by wine, I had an opportunity of witnessing several others treated after the antiphlogistic manner, and on a comparison of the results of the two systems, I should most unequivocally say that the wine or tonic plan of treatment was infinitely the most successful.

It appears, however, from your journal of the 7th and 14th of January last, that the treatment of erysipelas by wine has not been confined to St. Thomas's Hospital, but that Dr. Graves, of Dublin, also a contagionist, either by a happy coincidence, or in consequence of the lecture on this subject published by Dr. Williams, in the St. Thomas's Hospital Reports, has adopted a treatment essentially the same, or by wine and quinine enemata, and with such success, as that out of twenty cases only one died. Dr. Graves also states that this patient was at the time of attack labouring under fever, with dangerous cerebral symptoms, and which consequently greatly diminished the probability of the patient's recovery. I have Mr. Hewlett's* permission also to state, that since reading Dr. Williams' lecture, he has adopted the treatment there recommended, and he informs me with the best effect.

Here are, then, upwards of fifty cases with only three deaths, and those occurring in patients whose condition was hopeless from the first, either from neglect of all treatment, or else from previously existing disease. I submit, therefore, that they are in sufficient number to constitute a body of evidence, supported as it is by many authors of the highest repute, fairly establishing not only the great utility of a tonic treatment, but also, as a general principle, its superiority over the antiphlogistic practice.

In opposition to this principle, it has been contended by one learned critic, that every case of erysipelas ought to be treated according to the symptoms. The objection to this rule I conceive to be, that no disease depending on a morbid poison has ever yet been successfully treated by following up the symptoms, as it is termed; neither do I imagine, except in very extreme cases, that we possess any such satisfactory prognosis as will enable us to determine on the first appearance of idiopathic erysipelas, what will be its course or termination.

Another authority has contended, that, whatever may be the success of this treatment in London, it will not do in the country; here I think the ingenuity of the party has been displayed at the expense of his discretion; for what must we think of medicine, if its laws and principles change in every district? Can it be true that within the circuit of the walls of Chichester or Warwick, quinine, mercury, hydriodate of potash, &c. produce other effects than the same medicines when exhibited in London? I should think not. And I feel satisfied that the pupils of St. Thomas's Hospital, or of the metropolis generally, will not have to unlearn in the country, *as erroneous and injurious notions*, those principles of treatment in erysipelas which they have seen so successfully practised in London: but I must apologize for trespassing so long and so often on the columns of your valuable journal.

I am, sir,
Your obedient servant,
HENRY BULLOCK.

St. Thomas Hospital.
Feb. 27th, 1837.

* Surgeon of Harrow, Middlesex.

LOCOMOTION IN PARALYSIS.

To the Editor of the Medical Gazette.

SIR,

I APPLIED a few days since, and with the effect anticipated, the following simple arrangement, to facilitate locomotion in paralytic affections of the lower extremities:—

A grooved thin wood wheel, four inches in diameter, and adapted to run in an appropriate *block*, was suspended to a band encircling the neck, and adjusted to correspond to the site of the sternum.

A line corresponding to that of the *sash* having been passed over the wheel, had the one extremity steadily secured above the patella, to a laced cap surrounding the knee of the palsied limb; while the other end was made fast to a convenient handle, so designed as to extend the line when drawn.

The beneficial effect of the process consists in its enabling the paralytic limb to advance naturally, in a right line with the trunk, when the invalid with the sound arm draws the cord at the period of progression; and thus makes his step without exhibiting the rotatory motion of the limb which otherwise takes place.

The shortening of the extremity, which the double flexion of the hip and knee produces, readily explains why the above affords the advantage experienced. Time with practice are both more or less requisite for paralytic people to employ the apparatus usefully.

I am, sir,
Your obedient servant,
JOHN ELDERTON,
Surgeon.

Northampton, Feb. 15, 1837.

PLACENTAL PRESENTATION.

To the Editor of the Medical Gazette.

SIR,

ON perusing the late numbers of your journal, I observed two very interesting cases of placental presentation, treated with success, which remind me of a case almost similar I witnessed in the practice of my relative, Mr. Collier, of Shipston on Stour, Worcestershire, in October 1833. This gentleman's attendance was requested on the woman, between 30 and 40 years of age, residing about a mile and a half from the above place, who had been in labour for some hours: considerable hæmorrhage had taken place, by which the patient appeared much exhausted.

The pulse was weak, the countenance pale. On examining per vaginam, the placenta was found occupying the whole of that canal, distending it and the os uteri; the fœtus lay across the superior aperture of the pelvis. We decided upon immediate delivery; but, to prevent alarming collapse, wine and other stimuli were placed, ready at hand to be administered, in order to keep up the force of the circulation. This part was assigned to me (keeping my hand constantly upon the pulse, and closely watching its strength—losing no time in giving wine or brandy, when flagging or extremely low); whilst my friend proceeded steadily to perform the operation of turning, and which he succeeded in accomplishing in a short time.

A most favourable circumstance observed, was the proper degree of uterine contraction accompanying the birth of the child: when born, it appeared full-grown, and no doubt had been dead some hours.

The poor woman bore the operation extremely well, and was watched for some hours after. She was visited the four following days; no untoward symptoms occurred; her recovery, I am happy to say, was speedy.

By inserting this communication in your valuable journal, you will oblige,

Sir,
Your obedient servant,
JOHN COLLIER, M.R.C.S.

Brackley, Feb. 21, 1837.

IMMATURE BIRTH.

A LIVING FŒTUS BORN SOON AFTER FIVE MONTHS.

To the Editor of the Medical Gazette.

SIR,

CASES of the immature fœtus living are so rare, and prove so important in certain medico-legal inquiries, that I make no apology for sending you the following.

On Friday, the 27th January, 1837, I was called to Mrs. M'Intyre, ætatis 30, a shepherd's wife. According to the woman's own account, she is about five months gone with child, and has felt frequent motion of the fœtus during the last fortnight. I found her labouring under a severe attack of bronchitis, which had gone on for some days, and threatened to cause abortion. Notwithstanding the treatment adopted, the violent cough continued, and my patient gave birth to a fœtus on the morning of the 30th, at one o'clock. Considering all the circumstances of the case, and the woman's account, I was prepared to find the fœtus dead, and was much surprised to hear it cry very distinctly the moment it was expelled from the uterus. The fœtal circulation was allowed to go on until a warm bath was prepared for the child, and into this it was put after separation from the mother. It now began to breathe freely while in the bath, and afterwards being rubbed with spirits and wrapped in wool and flannel, was held near the fire. The motions of the extremities were strong and frequent; and a little sugar and water being mixed, it sucked and swallowed with all the instinctive power of a full-grown child. Respiration continued to go on with considerable regularity for three hours and a half, when it died without a struggle on the nurse's knee, having lived from 1 o'clock till half-past 4 A.M.

The following appearances were noted after death:—

The length of the body is 12½ inches; the middle point of the length being at the lower extremity of the sternum; and the weight one pound eight ounces and three-quarters, imperial standard weight. The skin is soft to the feel, and of a purplish tinge, with very little fatty matter beneath. The head round and comparatively small, with a few silky hairs scattered over it. The eyes were unopened, and the external ear complete and of a circular shape. The nails are not apparent. The labia are full, and distinctly separated by a clitoris, large and prominent.

This fœtus was probably some weeks older than the mother supposed, but we leave to others, more versant in such matters, to deduce from the particulars given the real age: the father says the exact age of the child is five months and seven days.

The case, as bearing upon the early viability of the fœtus, seems not devoid of interest. The writer has seen children born at the full time, in natural labour, who exhibited less vitality, and in whom the respiratory process was carried on with less regularity and completeness than in this case, who yet struggled on to advanced age. It is to be regretted that the extreme coldness of the house, and the want of a proper nurse, with the absence of other "*appliances and means*," gave the little individual no chance of longer surviving.

I am, sir,
Your obedient servant,
J. B. Thomson.

Alva, Stirlingshire,
Feb. 19, 1837.

TREATMENT OF HYDROCELE BY PUNCTURE.

To the Editor of the Medical Gazette.

Sir,

By inserting the following communication in an early number of the Gazette, you will very much oblige,

Your obedient servant,
A Constant Reader.

Glasgow, Feb. 24, 1837.

In consequence of the several papers which have of late appeared in the pages of your valuable journal regarding the proposal of treating hydrocele by simple puncture, and the allusion made by Mr. Travers to a similar mode of proceeding with ganglion, which he says has proved perfectly successful when followed by pressure, I was induced to look into the original paper of Dr. Cumin, of Glasgow, on this subject, in the Edinburgh Medical and Surgical Journal for 1825*. That gentleman, after explaining his mode of introducing a cataract needle into the ganglion, freely dividing its sac, and then pressing the contents into the neighbouring tissue, briefly narrates a case in which this mode of practice was successfully pursued.

Dr. Cumin, at the close of his paper, makes the following suggestion:—"It has occurred to me that a similar mode

* Vol. xxiv. page 97.

of operating might be applied to hydrocele, and that a cure of that disease might be accomplished by opening a communication, by means of the cataract needle, between the cavity of the tunica vaginalis and the cellular tissue of the scrotum. No suitable opportunity has presented itself of putting this idea to the test of experiment; but the trial is one which, in the hands of a cautious surgeon, would in all probability effect at least a temporary cure, and which could not be productive of any injurious or unpleasant consequences."

It thus appears that the idea of exposing the fluids of ganglion and of hydrocele to the action of the absorbent vessels of the cellular tissue, and thus effecting their removal, was submitted to the medical profession, in the pages of a widely-circulated journal, about twelve years ago.

MEDICAL GAZETTE.

Saturday, March 4, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

INQUIRY
INTO THE
WORKING OF THE POOR-LAW.

By this time, we suppose, the newly-elected Committee for inquiring into the operation of the present Poor-Law have regularly commenced business.

We mentioned last week that notices of motions for Select Committees of Inquiry were pending in the House of Commons, and that one was for a general investigation into the merits and demerits of the *amended* law, while the other merely sought an examination of the measure as to its alleged efficiency in providing for the wants of the sick poor. It has so happened that neither motion was carried. Lord John Russell, with a *tertium quid* in the shape of an amendment, stepped in and threw his lusty buckler over the Poor-law Commissioners; he would not allow a hair of their heads to be touched: the law must remain as it is, and the Commissioners are to be held sacred and inviolable. The minor details, however, may be meddled with, and the smaller fry of functionaries may be overhauled, if sufficient proof of their delinquency be forthcoming. The amendment of the Home Secretary, in short, led to the appointment of a Committee, to inquire into the whole working of the act *under* the autocrats who are intrusted with its supreme direction. Thus was the motion of the honourable member for Berkshire wholly defeated, and that of the member for Finsbury strangled even before birth.

Far be it from us to talk lightly of the defunct, but we cannot help being amused with the source of consolation which the parent of the latter nonentity has found for himself. He foresaw its fate last week, rang its passing knell, and then told us very coolly, somewhat in the style of Sir Fretful Plagiary, that he was "rather pleased than otherwise" at what was about to happen. For what—says our legislator—what would have been gained, after all, if my motion were carried?—the Committee would have been granted, the inquiry would have been instituted, the report drawn up and presented; but what would it have been worth? It would be said in the end, that the committee was partial, &c., "and thus, in the minds of many persons, the report would have been set at nought, and the evidence rejected as consisting of materials which had been collected or received by gentlemen whose prejudices unsuited them for conducting an impartial inquiry."

An honest confession, truly! But what are we to think of all this, after the glorification which has gone on for months—the mighty promises made of complete exposure and reform of evils—the self-laudation and advertising, all founded on the notice of a motion which

has been disposed of by a side-wind from Lord John Russell? It is so much the better, says Mr. Wakley, changing his note with the most admirable adroitness—we shall now have a *government* inquiry; mine would have been good for nothing.

We confess we were inclined to give the member for Finsbury some credit for his alacrity in endeavouring to make his promised motion; but it appears now that it was fortunate he was baffled, and that another arrangement has put his wholly out of the way. So says Mr. Wakley, and we suppose we must believe him this time; but let him not blame us for putting only small faith in any of his schemes for the future.

One word more on the funeral speech by anticipation of last week. The member for Finsbury congratulates the medical profession on Lord John Russell's amendment having been carried. Now Mr. Walter's motion was for a thorough inquiry into the whole system of the existing poor-law—its principles and its operation—to investigate the nature of the extraordinary powers committed to a few individuals who have already contrived to render themselves odious throughout the country, by their despotic and cruel severity. Lord John Russell's motion, or amendment, on the other hand, professes to have no objection to any inquiry short of touching on the *principle* of the law, and meddling with the conduct of the despots, its prime movers: the law itself must remain as it is, its operation in minor matters *may* be improved—that is, if it appear to require improvement. Yet this is the result on which the profession is congratulated; at the same time that medical men are informed that it does not signify in the least what may be the general upshot of the inquiry—"inasmuch as *Ministers* will be the authors and regulators of the proceedings," it matters "not one straw as to the tenor of the report:" only let there be evidence, plenty of medical evidence brought forward, and the evil will work its own cure. Who must not admire this virtuous zeal of the Finsbury patriot? Who does not appreciate the statesman-like view he has taken of the question? Let ministers keep their bill—let them persist in their retrenchment, or starvation, principle, which has rendered the *amended* Poor-law odious and abominable in the sight of every worthy member of society; what cares the patriotic Finsburian?—"not a straw," so as there is a *government* committee, and he in the number of the elect.

For our part we can form any thing but sanguine anticipations of the result of this inquiry. Limited, as it is to be, to exploring defects and grievances, and suggesting remedies, while the *causes* of those grievances, originating in the vile and unnational system which has been introduced amongst us, must be left wholly untouched, what can be expected? And in what way can medical men, who are unhappily trammelled in the system, be benefited, when the degradation under which they labour is part and parcel of that very system which is not to be permitted to be touched?

We should not despair, however. The inquiry will proceed, and its success will depend on the energy of those practitioners who are well informed on the subject, and will not hesitate to bear testimony publicly to the facts with which they are acquainted. The whole profession should be alive to the proceedings which are about to take place, for, be it remembered, they do not concern merely a few medical men living in distant parts of the country, but all indiscriminately, in town and country; the very character of the profession in England, so far as it is involved in that of the mass of its practitioners, is at stake.

A correspondent asks us (page 876), in reference to what we said last week of the propriety of the medical corporations interfering at the present juncture —whether the Colleges and the Hall can do any thing? We certainly think that they *can* do much if they please, and that they *ought* to do their utmost. We do not wonder at the question: for the apathy of those three bodies in regard to all external things relating to the comfort and convenience of their licentiates has long been remarkable: it would seem as if their *precamur tibi omnia fausta* were an eternal adieu, or a piece of advice to the diplomatist to consider how he should henceforth shift for himself, having nothing further to expect from the institution which had just bestowed upon him its honours.

An emergency, perhaps it may be said, has never arisen, of a sufficiently important nature, to call forth the corporate energy of our medical establishments. But that excuse can hardly at present serve their turn; for the principle of the act is spreading,—spreading with a cancerous malignity wherever it can gain access;—the ramifications of the system are protruding themselves every where; nor will the metropolis itself be able to escape them much longer. The consequence will be that a large number of needy, wretchedly remunerated, degraded practitioners, will be found in every quarter, and that a permanent character of a more or less disreputable kind will thus be impressed on the whole profession. The licentiates of the Hall will be reduced beneath the level of the *officiers de santé* in France; and if this be the fate of the great mass of medical men in England, what may we presume will be the destiny of those comparatively few who aim at maintaining a higher rank?

The Colleges and the Hall, then, we say, are imperatively *called upon* to interfere. If it be a part of their mission to support the respectability and dignity of the healing art, now is the time to show that they do not slumber at their posts: now is the time to show that those relations entered into between them and their *alumni*, when certain trials are made and fees disbursed, do not cease for ever.

As corporate bodies, demanding justice for those enrolled on their registers, we are satisfied that our medical institutions, in appealing to the legislature, would produce a powerful effect. We wish we could announce that some step of the kind is likely to be taken, but we regret to say that we can as yet perceive no sign.

How gratifying is it, in the midst of this sluggishness in the higher quarters, to observe the benevolent zeal of a distinguished veteran in the profession; we allude to Dr. Yelloly, of Norwich, who has just made public an excellent letter, addressed to Lord John Russell, "on the arrangements connected with the relief of the sick poor." In a temperate but firm spirit, he points out to his Lordship the mockery of the *relief* (so called) under the existing Poor-law; the cruelty of the system in relation to paupers requiring medical assistance, and the gross injustice and hardship imposed by it on members of the medical profession. We regret that we have not space to extract largely from Dr. Yelloly's observations, but we recommend them to the best attention of every medical man.

To the valuable paper of Messrs. Rumsey and Ceely, in our present number (see page 874), we would also direct attention, affording, as it does, the highest proof of the zeal of these gentlemen in labouring to construct what appears to be an admirably improved plan of medical relief under the Poor-law.

It is gratifying, we repeat, to meet with demonstrations like this, and some others to which we could also refer, showing that there are at least *individuals*, of high feeling and high standing, to whom the character of their profession is dear. Why have we no such demonstration from any of the Corporate bodies? Is it beneath their dignity, beside it, or inconsistent with it? We cannot believe that it is either. Let us therefore observe what passes, and calmly await the event.

LIST OF THE SELECT COMMITTEE

APPOINTED TO CARRY INTO EFFECT THE OBJECTS STATED IN LORD J. RUSSELL'S AMENDMENT.

Lord John Russell, Mr. Walter, (who has declined to act) Mr. Fazakerly, Sir James Graham, Mr. P. Scrope, Mr. Baines, Mr. Hume, Sir T. Freemantle, Mr. Cartwright, Mr. Barneby, Mr. Estcourt, jun., Mr. Ponsonby, Mr. J. Loch, Mr. Wakley, Sir O. Mosley, Mr. Villiers, Mr. R. Gordon, Mr. Miles, Mr. D. Harvey, Mr. Hodges (of Kent), Mr. Chichester (Barnstaple).

THE LATE MR. ATKINSON RANSOME.

This much respected surgeon died at his residence, Old Trafford, in Stretford, on Friday, the 10th ult. He was born at Norwich, on the 4th of March, 1779. He served his apprenticeship at Lynn, and proceeded afterwards to London, where he continued for some time. He first commenced business in Ipswich, and after residing for a short interval in Bury St. Edmunds, finally removed in 1805, to Manchester, where he was very soon after his arrival, and at about twenty-seven years of age, appointed one of the surgeons to the Infirmary.

Mr. Ransome has been long known as a very experienced and skilful surgeon; and it may be truly observed, that as an operator, in the most delicate and dangerous cases which professional men can have to undertake, few individuals have possessed so high a reputation, or so well deserved it. He commenced at an early period his career as a lecturer on some departments of his profession. He lectured on surgery in the Pine-street School since 1825, the year after the establishment of that institution; and his clearness, simplicity, and information, combined with much suavity of manners, rendered him a general favourite with the students. He was appointed by his colleagues to deliver, at the commencement of the present session, the general introductory address, a task which he performed in a manner to reflect much credit upon him, in reference particularly to the extent and variety of his intelligence, the liberality of his sentiments, and the practical importance of the instruction and advice which he imparted to the rising members of the profession.

It is well remembered that, on the opening of the Manchester and Liverpool railroad, Mr. Huskisson was killed by an accident. On that occasion Mr. Ransome was immediately sent for; and notwithstanding the fatal result, so ably did he discharge his professional duties, and so highly was that ability estimated, that Mrs. Huskisson presented to him, with expressions of acknowledgment and gratitude, a handsome gold snuff-box.

He was interred on Thursday the 16th, the funeral procession being formed by the members of the medical staff of the infirmary, the lecturers of the Royal School of Medicine and Surgery, and the students of the Pine-street School.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 28, 1837.

Mr. Earle, F.R.S., President, in the Chair.

A paper was read, on—

"*Long continued contraction of the Lower Extremities, from an affection of the Spine; with observations.*" By R. A. Stafford, Esq., Surgeon to the St. Marylebone Infirmary.

The author opens his communication with some preliminary remarks upon the influence which the spinal cord possesses in cases of local hysteria, between the various symptoms of which, and those which are produced by acknowledged disease, or injury of the spinal cord, he draws

a close parallel, with the express object of proving that pains, spasms, palsy, or want of muscular effect, muscular contractions of the limbs, and other symptoms, are common both to cases of local hysteria, and to diseases or injuries of the spinal marrow; and accordingly the author infers that both classes of cases have a common origin or cause in a congested or inflamed condition of the spinal cord, or of the roots of the spinal nerves, or of the membranes which invest these parts. And he supports his opinion by shewing that the most successful treatment is that which is directed to allay such congestion or inflammation of the spinal cord, and not that which is employed with a view to relieve the mere local symptoms.

The author illustrates his opinions by numerous examples, and especially quotes four cases, two of which he considers instances of local hysteria, terminating in a contracted state of the limbs, but chiefly of the lower extremities, and to such an extent, that the toes became closely bent on the foot, the foot on the leg, and the leg on the thigh. In both cases the patients were young females.

The other two cases are examples of diseased vertebræ, producing muscular contractions similar to those of the two preceding cases; and, in all four, the symptoms equally arose, in the author's opinion, from a deranged condition of the spinal cord.

In conclusion, Mr. Stafford divides the period of the complaints which are the subject of his paper into three stages:—1st, the acute state, marked by spasms, and pains, more or less severe, in various parts of the body, where he employs antiphlogistics, bleeding, purgatives, &c.; 2dly, the chronic stage, where blisters and other counter-irritants are used; and 3dly, the curative stage, where it is only necessary to restore, by suitable extension, the contracted limbs to their natural position.

At the conclusion of the evening, the President, in an eloquent speech, addressed the meeting upon his retirement from the chair, and took a survey of the progress of the Society during his Presidency, and of its prospects for the future.

Mr. Earle began by noticing the few resignations and deaths which occurred during the past year. There were but two of the former—three of the latter; and he made honourable mention of the deceased.

Of Dr. Hugh Ley, Mr. Earle said, he had not been long enrolled a Fellow, which might account for his name not having appeared in the Transactions. He was born at Abingdon, in Berkshire, in the year 1790. He was the son of Dr. Ley, who afterwards practised at Penzance, in Cornwall, where he died in the year 1826. The family of the Leys is of great respectability and antiquity in the west of England, and a branch of it was ennobled in the person of Lord Treasurer Ley, who was created Earl of Marlborough by Charles the First. Dr. Ley, the son, was educated at Abingdon, under the celebrated Dr. Lempriere, and being intended for the medical profession, studied assiduously at the Borough hospitals, and was admitted a Fellow of the Royal College of Surgeons, but afterwards went to Edinburgh, and graduated in the year 1813, having first published an inaugural dissertation, "De Naturâ intimâ Phthiseos Pulmonalis," in which he exhibited much research and discrimination. Dr. Ley returned to London about the time of the death of the late Dr. Thynne, who had been Physician to the Westminster Lying-in Hospital, for which appointment Dr. L. became a candidate, and was elected by a large majority, although opposed by Dr. Blegborough, a physician of extensive practice in London. Subsequently to this he became associated with Dr. Merriman, in giving lectures on midwifery and the diseases of women and children, at the Middlesex Hospital, and was appointed assistant physician accoucheur to that institution; and on Dr. Merriman's resignation, he was unanimously elected physician in his stead.

In the Medical Gazette there are several valuable communications from the pen of Dr. H. Ley. His only separate publication is an Essay on Laryngismus Stridulus, together with a dissertation on the Pathology of the Nerves, in which he places in a new point of view the nature of an obscure and doubtful disease. It is, indeed, a work abounding with practical information, and demonstrating in every page the acumen and sagacity for which the author was remarkable. But it was in the lecture-room that Dr. Ley shone forth most conspicuously, as few have ever possessed greater powers of language, or greater clearness in the arrangement of his matter. Of him it may be said with truth, "Erat in verborum splendore elegans, compositione aptus, facultate copiosus." Dr. Ley was appointed to the obstetric chair at St. Bartholomew's in the autumn of 1835, and speedily acquired the respect and regard of his class, who will long regret his untimely end. He died of an affection of the heart consequent on acute rheumatism. His professional character was deservedly high, and without blemish; his conduct and sentiments on all subjects were those of a gentleman.

Mr. Earle then gave a short biography of the late Mr. Charles Millard, similar to what has already appeared in our pages. We are obliged to economise our space, and shall therefore pass on to the notice of the late Dr. Henry, of Manchester.

Dr. William Henry (said Mr. Earle) is the third and last Fellow whose death I have to announce. He was a graduate of the University of Edinburgh, and was contemporary with Brougham, Jeffrey, and Mackintosh. He was educated to the medical profession, and was appointed Physician to the Manchester Infirmary. The delicate state of his health led him, at an early period, to relinquish the practice of his profession, and to devote himself to the same lucrative pursuits in which his father had been for many years engaged, and to which his taste for chemical research naturally inclined him.

The Transactions of this Society contain three papers from his pen. The first, which was published in the second volume, contains some accurate observations on the chemical properties of diabetic urine. The second, published in the eighth volume, is a short paper on the comparative mortality of measles. The third, which will be found in the tenth volume, is on urinary and other concretions. Dr. Henry is described by those who were intimate with him as having been a most agreeable and instructive companion; possessing great conversational powers; being always anxious to encourage talent, and draw it forth, without any unnecessary display of his own: in a word, he is described as having been the life and ornament of polished society. In all the relations of private life he was exemplary; in his conduct he was open, generous, and sincere. He united with great and successful attention to business an unabated and ardent love of science. He delivered several courses of lectures on chemistry, and published a volume on that science, which passed through many editions, and is equally precise in its information and elegant in style. Besides the papers and works already mentioned, he was a contributor to the Philosophical Transactions, and to the Memoirs of the Literary and Philosophical Society of Manchester. Among his literary productions, his character of Priestley, Davy, and Wollaston, rank deservedly high.

I would gladly pass over in silence the last tragical scene which closed his career, but that it has already become a matter of history; and his biographer has even thought proper to adduce the examples of Brutus, Cato, and Seneca, in extenuation of the act. As a Christian, I cannot but condemn the sentiments which are expressed in the memoir to which I have alluded. The attempt to palliate a deed committed at a moment when reason had lost her salutary control, by adducing examples of heathen heroism—the cool and deliberate act of minds on which the light of christian revelation had never shone—is, to say the least, equally injudicious and injurious to the memory of the departed. It appears that Dr. Henry had taken a very active part in the proceedings of the British Association, which had been held at Bristol, and returned home in a state of great excitement. For several weeks, "tired nature's sweet restorer, balmy sleep," scarcely ever visited his eye-lids: his active mind was kept too constantly on the stretch, and at length gave way; and, in a moment of temporary insanity, he rushed unbidden into the presence of his Maker. "Fuit hoc luctuosum suis—acerbum Patriæ—grave bonis omnibus."

But let me quit this painful and ungrateful theme, and turn your attention to the more pleasing prospect which the increasing numbers of our associates and rising prosperity of the Society afford. To supply the places of our departed brethren, I have to report that thirty-five new Fellows have been elected during the past year, making, with those elected during the first year that I had the honour of holding this chair, a total of seventy-two members, of whom fifty-eight have enrolled their names, and to whom, with your authority, I have had the gratification of extending the hand of fellowship; to many of whom, from their rank and talent, we may confidently look for upholding the character and extending the sphere of usefulness of this Society. In addition to these seventy-two contributing members, I may add eighteen Honorary Fellows, including some of the brightest ornaments of medical science in various quarters of the globe, and who have all expressed their grateful acceptance of the honour which has been conferred on them.

As might be expected from so large an accession of members, I have much pleasure in being enabled to give a very favourable report of the funds of the Society, which have been not only adequate to the entire ordinary disbursements, and to liquidate some debts and extraordinary expenses which had gradually accumulated, but likewise leave a considerable balance in the hands of our Treasurer: but I will not anticipate further the auditor's report, which will be laid before you to-morrow.

Gentlemen, there has been considerable delay in the production of the 20th volume

of our Transactions, which, however, I now have the pleasure of presenting to you.

Having called the attention of the Society to several matters relating to the internal management, Mr. Earle said, in conclusion—

Gentlemen, I cannot quit this chair without endeavouring to express the high sense I entertain of the honour which you conferred on me in appointing me your President during the two past sessions. I trust that I may, in retiring, be allowed to hope that the punctuality of my attendance, and the impartiality with which I have endeavoured to preside over the meetings, and to regulate the discussions, has justified you in the nomination, although I feel that, in many other respects, I may have fallen short of my predecessors.

In taking a careful retrospect of those meetings, and recalling to my mind the discussions, there is but one opinion which fell from me as chairman which has caused me any regret, and which I could wish to recal; and it is singular that the paper read this evening should be from the very same author on whose former paper I pronounced what I now believe to have been an erroneous opinion.

In a paper on Fractures of the Spine, Mr. Stafford adduced a case, and produced the patient in this room, with an angular projection of her first lumbar spine, the result, as he supposed, of fracture, but which appeared to me to be a case of caries of the bodies. I subsequently had a patient in St. Bartholomew's, in whom a similar appearance proved after death to be from fracture by contre coup, which was the consequence of a fall on the buttocks. In explanation, I can only assure the author, and any gentleman whom I may have misled by my opinion, that it was at the time I delivered it as much the honest conviction of my mind, as my present apology to him is frank and sincere.

Gentlemen, I shall always consider the appointment to this chair as one of the most honourable which can be conferred by a large body of independent scientific men on one of their colleagues. To be deemed worthy to follow "*haud passibus æquis*," indeed, a Cline, an Abernethy, or a Cooper, is in itself most flattering and honourable, but in my case there were other sources of sincere and heartfelt gratification. Having successively filled the office of Secretary for seven years, and of Treasurer for five, I could not but accept the appointment to the highest office in the Society, as affording satisfactory proof that my previous humble efforts for the common weal were appreciated by the Fellows generally. In retiring once more into a private station, to cultivate in common with yourselves the ample fields of medical science, I beg to assure you that I shall at all times consider it my duty to submit to this Society any new facts or opinions which can in any way promote our common objects—the investigation of truth, and the alleviation of human misery. As this Society kindly fostered many of my earlier fruits, I shall not fail to offer for their acceptance those of my maturer judgement; and should the plan which I ventured to suggest last year, of forming Sub-Committees for the investigation of particular subjects, and for clearing up any doubtful or disputed points of practice, be carried into execution, I trust I shall not be found wanting in zeal in aiding, and promoting to the best of my abilities, any inquiry in which it may be supposed that my services can be of any avail.

Gentlemen, once more let me beg you to accept my thanks, and suffer me to express my warmest wishes for the general prosperity of the Society, and for the health, happiness, and success of each individual Fellow.

On Wednesday, March 1st, the Anniversary Meeting took place, when the following officers and members of the Council were elected:—

President.—Richard Bright, M.D. F.R.S.

Vice-Presidents.—Robert Williams, M.D.; Thomas Addison, M.D.; John F. South, Esq.; J. P. Vincent, Esq.

Treasurers.—Samuel Merriman, M.D.; J. M. Arnott, Esq.

Secretaries. — John Clendinning, M.D.; J. G. Perry, Esq.

Librarians. — John Thomson, M.D.; William Coulson, Esq.

Other Members of the Council. — Henry Earle, Esq. F.R.S.; Thos. Nelson, M.D.; J. G. Andrews, Esq.; G. H. Weatherhead, M.D.; Thomas Copeland, Esq. F.R.S.; Richard Pinckard, M.D.; Richard Partridge, Esq.; Henry Lee, M.D.; Joseph Moore, M.D.; Thos. Davis, Esq. (Hampstead).

From the Auditor's report, it appeared that—

	£.	s.	d.
The receipts of last year amounted to.....	679	4	6
Expenditure	618	11	3½
Balance in hand	£60	13	2½

The sum total of debts amounting to no more than about 4*l*.

OBSERVATIONS

ON

THE PRESENT CONDITION OF MEDICAL RELIEF FOR THE SICK PAUPERS;

WITH RECOMMENDATIONS FOR AN ALTERED AND IMPROVED SYSTEM.

(For the Medical Gazette.)

A CONSIDERABLE proportion of the general practitioners of medicine in this country are engaged by the Poor-law authorities to supply medical attendance and medicine to the sick paupers. Many practitioners who are not thus employed at present, have been so formerly, or are expecting to be so in future.

The appointment to the medical care of a union, or district, affords the readiest opportunity for obtaining or preserving "private practice" in the locality of such appointment, and thus for securing a means of livelihood.

There is a vast and an increasing number of unemployed young men in the medical profession.

Under the present system, therefore, the majority of medical men are found to submit to any regulations, however degrading to their professional station, and to accept any remuneration, however insufficient in itself to secure the required aid, in order either to preserve their former sphere of practice from encroachment, or to enlarge that sphere, or to procure an advantageous introduction into an entirely new sphere.

It is therefore obvious that the influence, direct and indirect, possessed by the administrators of the Poor-law over the great body of general practitioners, is immense, and if not wisely exercised, must have an injurious effect upon their moral position, and their station in society.

This influence is, however, much increased, by the fact that the professional reputation of the medical officers of unions is at the mercy of the Poor-law Commissioners, and the Boards of Guardians, both of which parties, although destitute of medical knowledge and information, possess the power of deciding as to the proper performance of medical duties, of exculpating any practitioner employed by them from any charges affecting his professional conduct, or of branding him as unskilful in his vocation, or negligent of his duty.

So long, indeed, as the present unlimited powers of appointing and dismissing — of summoning and judging — of justifying and condemning medical practitioners, continue to be vested in parties necessarily so incompetent, (even although a fairer remuneration for the duties performed were conceded) the medical department of the Poor-law must continue a fruitful source of degradation to the profession — of contention and complaint in every locality — and of suspicion and dissatisfaction, not only towards the Poor-law administration, but towards the government of the country.

It has long been found expedient that medical men employed in the public service should be placed under medical supervision. For this reason, and to remedy the serious evils just noticed, as well as to introduce some uniformity and regularity* into the medical arrangements for the sick poor, we recommend that the general superintendence and control of the medical department of the Poor-law administration be entrusted to a medical board, similar to the army and navy medical boards, and composed of persons practically acquainted with medico-parochial duties.

2. The remuneration awarded to union medical officers, is either determined by tender, or is fixed by the Poor-law Commissioners. The first of these modes has the effect of reducing the remuneration (for reasons relating to private practice already mentioned) to a mere nominal amount, and therefore cannot be relied on as a means of ascertaining what is just to the profession, or of insuring proper attendance to the sick poor. It is, besides, universally considered by medical men as disgraceful to them, and is not practised in any other learned profession, nor in the army and navy, nor in any civil office, nor in any liberal occupation; and if introduced into any of these departments, would produce the same dissatisfaction and sense of degradation to the persons employed, and the same inferior performance of duty. The second of the above-named modes is frequently combined with the first; that is, if the "tenders" offered are not considered low enough, the Poor-law Commissioners, or the Boards of Guardians, arbitrarily reduce the amount to their own ideas of adequacy. Thus, neither are medical men allowed to fix their own terms under competition, as has been professed, nor are they permitted to have a voice in deciding what is just to them-

*The present entire absence of any thing like uniformity and regularity in the medical arrangements of the Poor-law Commissioners, may be seen by a reference to the Reports of the several Assistant Poor-law Commissioners, contained in the Appendix to the Second Annual Report of the Central Board.

selves, this decision being entirely committed to the other party in the contract, viz. the Poor-law authorities.

We therefore propose either that the legislature, as a supreme impartial authority, should fix the rate of remuneration; or that this be entrusted to a Board, to whom both parties might confidently look for justice.

If the latter alternative were adopted, and if it were agreed that the Medical Board, already recommended for other purposes, should also exercise this important function, it would be reasonably expected by the medical profession, one member at least of this Board should be appointed by, and responsible to the profession.

3. At present, weekly Medical returns are required to be made to the Board of Guardians, with specifications, not merely as to the names, ages, date of illness, and general state of the pauper patients, which is an unobjectionable regulation, but also as to the nature and designation of the illness, the frequency of medical visits, and even the treatment of the disorder, which latter three particulars must be, for the most part, unintelligible to the parties by whom they are required, and are felt, on this ground, to be inquisitorial by the medical attendants.

While, therefore, the first four particulars continue to be reported to the Boards of Guardians, it is highly important that complete reports of cases under treatment be made to the proposed Medical Board. Such reports would afford evidence of the nature and amount of duty, and the efficiency of its performance; they would also constitute a check against abuses of every description; and if periodically completed and published by the Medical Board, would prove valuable to science, and useful to the public.

4. Under the present system it is a common practice to entrust the care of extensive districts of parishes, and sometimes of entire unions, to individual medical officers. By this arrangement, so detrimental to the sick poor, and so injurious to established practitioners, the Poor-law authorities are enabled to offer "wider fields" for competition, and thus to attract a greater number of unemployed adventurers, and to reduce still farther the rate of remuneration. But however destructive to the interests of the present race of practitioners, and to the safety of sick paupers, such temporary expedients may prove, it is obvious that, ultimately, there can be no other reasonable method of supplying medical aid to the paupers, but by means of the nearest medical residents—men whose ordinary range of practice includes the parish for which a medical officer is required.

We therefore consider it essential that the present arbitrary distribution of the parishes into medical districts be abolished, so that the medical officer be appointed for each district separately.

No surgeon should be permitted to undertake more than a certain amount of parochial duty, nor to act unless possessing certain qualifications as to length of practice, &c. &c.; both which should be regulated by the Medical Board.

If any surgeon, not previously resident or living at a distance, be appointed to the care of a parish or workhouse, the reasons for such appointment should be transmitted to the Medical Board. No election to be valid unless confirmed by the Medical Board. No medical officer should be liable to any investigation of his official conduct, or to be dismissed from office, except by the Medical Board.

Every medical officer should be permitted to resign at any time, upon giving reasonable notice.

5. At present, the relieving officer is permitted to usurp the proper functions of the medical attendant, by deciding on the necessity of medical aid in sickness or accident, and thus to interfere with the effective treatment of the sufferer.

In giving orders for medical relief, the relieving officer is naturally guided only by the desire to retrench immediate expenditure; and, especially where the contract is at a sum per case, he is frequently induced to deny relief to most important ailments in their incipient stages; and thus, with the intention of saving a few shillings at the time, may probably inflict a permanent charge on the rates of some pounds;—not to dwell upon the inhuman neglect and aggravation of disease which such a practice necessarily occasions to the pauper. On the other hand, where the contract is at a fixed sum, this officer feels no check, and therefore generally distributes the orders for medical relief recklessly, without consideration either for the ultimate effects upon the rate-payers or the present loss to the practitioner, and often without visiting at the time, or subsequently, the person for whom he gives the order.

We propose, therefore, that the present practice be entirely discontinued, as affording no security to the rate-payers, no safety to the sick paupers, and no justice to the medical officer; and that the following arrangement be substituted:—

Every sick pauper to apply in the first instance to the medical officer, who should be authorized to relieve him at once, if necessary; and, in that case, to furnish him with a certificate stating that the case required treatment. This certificate should be sent by the patient to the relieving offi-

cer in a specified time after receiving it—say twenty-four hours. The relieving officer should inquire into the circumstances of the patient (if he be not already receiving relief in money or in kind) before the next meeting of the Board of Guardians, and should made a report thereon at that meeting; and thus enable the Board to divide the patients attended into two classes—the one to which the medical relief should be unconditionally given, and the other to which it should be merely afforded by way of loan, the cost being recoverable according to the provisions of the Poor-Law Amendment Act. The Board of Guardians might, of course, if they thought proper, refuse the continuance of the loan of medical relief to such persons. The cost of the relief thus afforded might be calculated at so much *per diem*, with an additional charge for journeys; and should be distinct from any arrangement for the regular paupers.

The result of the whole plan, as sketched out in the foregoing observations, would be, that medical attendance on paupers would be placed under effective superintendence and control; that the just rights of medical practitioners would be protected; that the rates would be secured from expenditure on improper objects; that the sciences of medicine and of vital statistics would be enriched by an extensive and valuable collection of facts; "that the community would have the satisfaction of knowing that the sick paupers would be promptly and efficiently attended by men with local attachments, established practice, and matured experience, affording the surest guarantee for the possession of the many moral and professional requisites for such varied, arduous, and responsible duties."

(Signed) NATH. RUMSEY.
ROBERT CEELY.
H. W. RUMSEY.

Feb. 23, 1837.

NECESSITY OF PETITIONING AGAINST THE POOR-LAW ACT.

To the Editor of the Medical Gazette.

Justum, ac tenacem propositi virum,
Non civium ardor prava jubentium,
Non vultus instantis tyranni
Mente quatit solida. HOR.

SIR,

I ENTIRELY agree with you, that "if the Poor Law be allowed to continue in its present state, it must entail permanent disgrace and degradation on the profession."

You have done the utmost to place this clearly before the eyes of the profession from first to last, and I, in common with my brethren at large, sincerely thank you. May your efforts prove successful! I do hope your last appeal will be cordially responded to at least by the great body of practitioners. But can we confidently look to the Colleges or to the Hall? I fear not. Are they impotent, indifferent, or unwilling? What have they done?—Nothing. What can they do?—They say, "Nothing." Then must we help ourselves.

Well I know the grievous thraldom in which a great number of my brethren are now involved;—well I know the galling slavery many of them are compelled to endure. Deeply I regret that dire necessity dooms so many of them to submit with silent loathing and concealed disgust to worse than Egyptian bondage. Many of them are, indeed, deserving of deep commiseration. But can they expect redress without complaint?—Can they hope for aid without putting *their* shoulders also to the wheel? Let their conduct at this important period justify their claims on the active sympathy of their more fortunate or more independent brethren. To them, indeed, may they *then* confidently appeal.

"If the character of the healing art be in any way dear to us"—if it be desirable to prevent the perpetuation of a most degrading thraldom, the general infliction of a most disgraceful slavery, and the continuance of a most detestable tyranny—let all those who desire to be free, and dare to be honest, manly, and just, speak out—expose the enormities of the present system, especially as regards the medical department — respectfully but earnestly demand redress, and redress must come.

Is it, sir, in the nineteenth century, at a time when every class of the community is so active in acquiring, and so vigilant in maintaining its rights, that an industrious, useful, educated, enlightened, and liberal profession, which is daily conferring on the public unrequited obligations, should allow its just rights to be infringed, and its legitimate privileges to be assailed, by arbitrary and reckless authority, without making timely, adequate, and combined resistance? Have we advanced in science and utility only to retrograde in character and station? God forbid!

Let, then, the Provincial Association, which, to its eternal credit, has accomplished so much, still persevere. Let it arouse its members to a sense of duty and of danger. No time should be lost. Let its councils, in every part of the kingdom, instantly get up petitions to parliament, after the excellent form adopted by the

meeting at Manchester, and again urge on its members the necessity of promptly affording that aid, in the approaching inquiry, which so many have it in their power to bestow. Let every one of us, by petition, or by evidence, to the utmost of his ability heartily co-operate at the present crisis, remembering that while we are asserting the rights and privileges of the profession, we are at the same time supporting the cause of truth, justice, and humanity.—I am, sir,

Your very obedient servant,
A Country Practitioner,
but no Slave.

Feb. 28, 1837.

TREATMENT OF THE INFLUENZA.

REPLY TO MR. SEARLE.

To the Editor of the Medical Gazette.

Sir,

As the treatment of the epidemic catarrh, which still to some extent prevails, is the test by which Mr. Searle wishes his new-fangled doctrine to be tried, I beg, through the medium of your journal, to inform him, that I do not consider that disease to be a criterion by which we ought to judge of the correctness of the views which he entertains respecting the treatment of inflammatory diseases. The inflammation which attends the influenza is very different in its nature from acute, idiopathic pneumonia, or bronchitis. It is modified by the debilitating epidemic disease, of which it is, in fact, merely an effect; and in order to illustrate this point, I may observe, that in typhus fever, inflammation of the brain or of its investing membranes, occasionally takes place at some period of the disease. I have witnessed many cases of this description, and the treatment which I have found to be most successful is to take a little blood from the temples by leeches, or from the nape of the neck by means of cupping-glasses; to shave the scalp,—to cover it with cloths, which ought to be kept constantly wet with cold water; to apply a large blister to the nape of the neck; and to administer antimonials. When this practice, which in some respects differs materially from that which I would recommend in pure encephalitis, is followed, the fever in some cases runs quickly on to a favourable termination,—in others it proves fatal; but in all, the cerebral affection, as every practitioner of experience well knows, is very different in its nature from acute idiopathic phrenitis. It is not, therefore, the kind of inflammation which we occasionally meet with in such diseases as typhus fever, and the present epidemic, that we are to look for proofs of the soundness of Mr. Searle's doctrine; nor is it to acute idiopathic peritonitis, enteritis, pneumonia, or phrenitis, that we ought to turn our eyes. And I will venture to say, that if a physician, when called on to prescribe for a patient, the symptoms of whose disease are intense headache, wild delirium, red fiery eyes, flushed face, and burning skin, were to prohibit the use of the lancet, which I consider in such cases to be the anchor of hope, and to recommend the "fearless administration of nourishment," he would soon discover that the fruit of such a plan of treatment, in most cases, would be death. And until Mr. Searle can convince me that I should be enabled either more speedily or more certainly to cure such a disease as the one I have just described by his nourishing mode of treatment, I must remain in my unbelief, and continue to oppose the new-fangled doctrine, which I consider to be a kind of an idol which Mr. Searle has set up for himself, and which he has worshipped and adored until he has become so blind as to be unable to perceive its imperfections, even when they are clearly pointed out to him. In this respect, however, he is not singular; for true it certainly is, that in all ages some even of the most distinguished members of the medical profession have also had their idols, before which they have bowed with the same kind of blind enthusiasm; and as I have reason to believe that Mr. Searle is an exceedingly well-informed practitioner, I beg to say that it will afford me much pleasure to continue the present controversy, in the hope that he may either speedily make me a convert, or that I may in the end succeed in dispelling the mist which prevented him, as I at present believe, from perceiving that the new-fangled doctrine which he has promulgated is unsound and dangerous.

I cannot, however, for reasons that need not at present be mentioned, comply with the request which he has made in your journal; indeed, I do not see of what use the avowal of my name possibly can be. My object is "not to cavil," but, if possible, to find out the truth; and I am surely just as likely to succeed in discovering the object of my search by the name of *Investigator* as by any other name. Mr. Searle must, therefore, rest satisfied for the present with the name which I have thought proper to assume; but as soon as my conversion takes place, if destined I am to be converted, I beg to assure him that I shall at once not only inform him

of my real name, and acknowledge the error of my present opinions, but to the utmost of my power assist him in his endeavours to establish the new doctrine,—a doctrine which, notwithstanding all that has been said respecting it, I still consider to be my duty strenuously to oppose.—I have the honour to be, sir,

Your most obedient servant,

INVESTIGATOR.

London, Feb. 20, 1837.

CASE OF SUCCESSFUL CÆSAREAN SECTION.

BY DR. MEYER,
Of Minden.

THIS is the fourth time Dr. Meyer has performed this operation, and three of his cases have terminated favourably. The subject of the following was the wife of a shoemaker, named Holle, residing at Minden, a woman of small size and slender make, aged thirty-eight, who had previously enjoyed good health, and borne three children easily and without any bad consequences. After this she was attacked with an arthritic affection, which, from poverty, privations, grief, and want of timely assistance, had increased to such a degree, that, for the space of a year, she only left her bed occasionally, and was then merely able to crawl about her room, bent double and holding by the chairs.

In this state she became again pregnant; an occurrence, of which the first intimation was given by the motions of the fœtus in utero. On the evening of the 19th of June, labour came on, and towards morning, the midwife in attendance, having discovered an abnormal state of the pelvis, advised her to have the assistance of an accoucheur. A neighbouring physician, Dr. Heilbronn, was called in, who, finding the pelvis so deformed as to render artificial delivery by dismemberment, or the Cæsarean section, unavoidable, ordered the patient to be blooded, and requested Dr. Meyer to take charge of the case.

An examination *per vaginam* showed that the pelvis was excessively deformed. On introducing the finger, which was done with difficulty, owing to a bending inwards of the ossa ilii and pubis, the summit of a round solid body was felt, which at first might be taken for the head of the child, but a more accurate examination proved it to be the distorted promontory of the sacrum, which projected close to the retreating symphysis pubis. Hence it was immediately concluded that the child lay entirely in the false pelvis; a circumstance which also explained the extreme prominence of the belly, which rested with the navel touching the external parts of generation.

Besides that the child was still living, the impossibility of getting at it through the vagina determined Dr. Meyer to abandon at once the idea of dismemberment, and he decided on this plan of operation, which the mother also pressed for; although, from her unfavourable condition, there was little hope of saving her. The further proceedings are thus described by Dr. Meyer:—

"The patient was carried to the table, and placed on a straw mattress. The thighs could be separated only so far as merely to afford room for the hand of an examiner; the lumbar vertebræ appeared to be anchylosed with each other and with the sacrum, and it was impossible to place her in an horizontal posture. In this half-sitting posture, the abdomen presented a space of only about four inches from the umbilicus to the pubes. Notwithstanding this, and the presumption that the placenta lay in the line of the proposed incision, I made choice of it for reasons which seemed to me conclusive.

"Two assistants stood, one on each side of the patient, with large soft sponges, warmed and slightly oiled; while Dr. Heilbronn stood at her feet, ready to hand the instruments and take hold of the child. The abdomen was then firmly and powerfully drawn up, and an incision, about four inches in length, was made through the integuments, commencing as close as possible to the umbilicus, and terminating at the pubes. The division of the linea alba and the peritoneum, to the same extent and in the same direction, gave exit to a considerable quantity of water, showing the coexistence of ascites. The discharge of this fluid, however, diminished the enormous tension of the abdomen, and contributed to facilitate the delivery. In all my former cases I had found the uterus extremely thin, scarcely thicker than stout paper, and easily divided: in the present instance, however, the walls were unusually firm, and three lines in thickness. A new obstacle here arose: in cutting through the uterus, the knife entered the placenta, which was attached exactly opposite the line of incision. The consequences were, a division of the larger vessels which are collected about the centre of the placenta, giving rise to a considerable hæmorrhage, and a further interference with the previously limited space for the introduction of the hand and the passage of the child. No time, however, was to be lost: the section of the anterior wall of the uterus was speedily completed, the necessary detachment of the placenta was accomplished without any excessive hæmorrhage, and

the right knee of the child presented. As the opening in the womb was scarcely large enough for the passage of the head, it was necessary to extract the arms; after which the head followed, not without some resistance, yet without any laceration of the uterus. The extraction of the child was followed instantly by a remarkable contraction of the womb, and the bleeding stopped.

"Vomiting came on, accompanied by spasmodic contractions of the abdominal muscles, so that the assistants were obliged to direct their whole attention to the intestines, which were protruded with great force, and which were returned and kept in with much difficulty by the oiled sponges. When the blood and aqueous fluid were removed from the cavity of the abdomen, the uterus was soon contracted to about the size of two fists; and, as the somewhat swollen edges of the incision were tolerably approximated, the external wound was united by suture without further delay. After it was finished, a repetition of the vomiting forced a piece of omentum, about two inches long, through an interval between the sutures, two inches below the umbilicus: this was removed with the scissors without any hesitation. Immediately over the pubes an opening was left, about an inch in length, into which a tent of lint was inserted; compresses were placed at each side of the wound, a twelve-tailed bandage applied, and, in half an hour from the commencement of the operation, the patient, who during the whole time neither stirred nor uttered a single moan, was laid comfortably in bed; the vomiting had ceased, and the cough was less troublesome. The child, a male, come to its full time, and twenty inches in length, but imperfectly nourished, had breathed immediately after delivery, cried, and was doing well. About half an hour afterwards, during a violent paroxysm of coughing, a full half-ell of intestine was forced through the opening at the lower end of the wound, and lay between the thighs distended with flatus. Dr. Meyer, unwilling to undo the bandage in the absence of proper assistants, fortunately succeeded in reducing it by the taxis, and secured the opening with a compress and strips of adhesive plaster." The patient ultimately got quite well.

From the successful termination of this and two other cases, Dr. Meyer is led to the conclusion that the Cæsarean section is much less dangerous than is generally supposed; that, when we have recourse to it in time, and under favourable circumstances, it is oftener followed by a happy result than other violent modes of artificial delivery, adopted in case of great contraction, and abnormal formation of the pelvis; and that, generally speaking, when there is great probability of saving the mother, it should be preferred to dismembering the living child. Leaving the question undecided, whether the lateral incision should be selected, because the section of the anterior wall of the uterus is likely to meet the placenta, his experience inclines him in all cases to make choice of the linea alba. Finally, he corrects a statement made by him in a paper inserted in Siebold's Journal, 3d Band. 1st Heft, that "in such operations, only one intelligent assistant is necessary;" and declares it to be his conviction, that three intelligent assistants are requisite,—two to prevent the protrusion of the intestines, and a third to remove the placenta and fœtus *.

OPERATIONS ON VEINS.

Several eminent surgeons have lately exercised their ingenuity about certain operations upon the veins, even more than upon the arteries. When the veins become varicosely enlarged, every one knows the serious consequences, and the great difficulty experienced in finding out a mode of treatment at once safe and effectual. It is not admissible for me to enter into a history of what has been done for varicose veins; I can indeed but briefly allude to the most modern proposals. We cannot surely expect much from an electric shock conveyed along the enlarged vessels. Breschet's plan of pinching the veins, whether of the cord or of the extremities, by forceps constructed for the purpose, has frequently answered, and has not been often followed by the severe and dangerous symptoms of phlebitis; I am, however, assured, that repeatedly the parts included in the forceps, not excepting even the vein itself, have sloughed, the ulcer afterwards healing, and all doing well. Sanson has constructed forceps for the same purpose, with the blades so broad, that he keeps the sides of the vein in contact for the extent of nearly an inch; it is said to be not absolutely necessary that the vein should be included between the blades of the instruments, nor that adhesive inflammation should arise; it is sufficient that the vein be compressed so as to stop the course of the blood, when a clot forms, which is subsequently absorbed, leading to obliteration of the cavity of the vessel. The passing of the needles through the varicose vein, after the ingenious manner first practised by Mr. Phillips, of London, for obliteration of the arteries, and for which proposal he has received such

* Neue Zeitschrift für Geburtskunde; and Dublin Journal, Jan. 1837.

honourable distinction in another country, has been recently tried by Lallemand, Davat, and Velpeau. The last of these experienced surgeons has also passed needles beneath the vein, and twisted a ligature circularly or *in eight* under the projecting ends of each needle, so as to compress the vein. I have myself adopted this plan, and although there was suppuration in the cellular substance, neither general fever nor phlebitis arose, the patient being quickly cured of a troublesome ulcer, and the dilated vein either restored or obliterated.—*Mr. Crosse's Retrospective Address.*

INFANTICIDE BY POISONING.

To the Editor of the Medical Gazette.

Sir,

In the 22d of Dr. Cummin's excellent lectures on Forensic Medicine, published in your last number, he states it as probable, that there is not a single case on record to show that poisoning has ever been had recourse to as a mode of murdering the new-born infant. Dr. Cummin may be correct in making this statement if he confines his remark to *medical* records; but if he means to be understood generally, as stating that no such case has ever occurred, I apprehend, if my memory does not greatly deceive me, that there exists at least one exception to the truth of his remark. In the records of the Justiciary Court at Glasgow, I think it will be found that such a case did occur some twelve, perhaps, or fourteen years ago. The poisonous substance which was employed on this occasion was the yellow powder called orpiment, or sulphuret of arsenic. Dr. Corkindale, of Glasgow, if applied to, would be able to furnish all the details of the case, as he is always employed by the authorities upon such occasions in that city, his medico-legal knowledge and experience being of a very high order. It is very likely, too, that Dr. Ure's services were required at the trial.—I am, sir,

Your obedient servant,

William Maclure.

14, Harley-Street, Feb. 27, 1837.

NEW MEDICAL BOOKS.

A Treatise on Painful and Nervous Diseases. By A. Turnbull, M.D. Third Edition, 8vo. 6s.

The Medical Properties of the Bladud Spa Waters. By C. T. Edwards. 8vo. 3s.

The Works of John Hunter. By J. F. Palmer. 4 vols. 8vo., with 4to. vol. of Plates. Vol. I. 17s. 6d.

The Surgical Works of John Hunter. By J. F. Palmer. 3 vols. 8vo., with the Plates inserted. Vol. I. 17s. 6d.

LITERARY ANNOUNCEMENT.

The Hunterian Oration, delivered in the Theatre of the Royal College of Surgeons in London, on the 14th of February, 1837. By Sir Benjamin Brodie, Bart., F.R.S.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

February 23, 1837.

William Pilling, Manchester.
Edwin Fagg, Cheltenham.
Robert Lyons Campbell, London.
William Ashcombe, Winchester.
John Strudwicke Bunce, Bridgewater.
Henry Gordon Harbord, Kingston-upon-Hull.
John Samuel Charlton, Rochester.
William Rowland, Anglesea.

March 2, 1837.

Peter Raven, of Leteham.
Thomas Skeel, of London.
William Cross, of Clifton, Bristol.
Peter Walsh.
Richard Edward Cooke, of Southwell.
Joseph Manlove, of Nottingham.
Alfred Harmer, of Ipswich.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Feb.* 28, 1837.

Age and Debility	50	Hooping Cough	18
Apoplexy	10	Inflammation	27
Asthma	24	Bowels & Stomach	3
Childbirth	1	Brain	2
Consumption	67	Lungs and Pleura	11
Convulsions	33	Influenza	8
Croup	3	Insanity	4
Dentition or Teething	5	Liver, diseased	5
Dropsy	8	Measles	7
Dropsy in the Brain	11	Mortification	2
Dropsy on the Chest	1	Paralysis	2
Epilepsy	1	Spasms	1
Erysipelas	1	Thrush	1
Fever	6	Unknown Causes	3
Fever, Scarlet	1		
Heart, diseased	3	Casualties	2

Decrease of Burials, as compared with the preceding week . . 29

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

Feb. 1837.	Thermometer.		Barometer.	
Thursday . 23	from 34	to 49	29·62	to 29·33
Friday . . 24	29	45	29·60	29·90
Saturday . 25	27	42	29 98	30·10
Sunday . . 26	25	41	30·10	30·07
Monday . . 27	26	41	29·96	29·88
Tuesday . . 28	30	41	29·95	30·09
March.				
Wednesday 1	24	39	30·24	30·31

Winds N.W. and N.E.

Except the 24th, 25th, and morning of the 26th ult. cloudy; rain on the 23d and 28th.

Rain fallen, ·25 of an inch.

Charles Henry Adams.

Wilson & Son, Printers, 57, Skinner-St. London

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 11, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XXIII.

Opening of a new division of the Course—Diseases and Injuries medico-legally considered: First, those of the Mind—Unsoundness of Mind — *Psychology a mixed science, peculiarly adapted to the study of medical men — Legal distinctions and decisions respecting Unsoundness of Mind:* 1. *In Civil cases—Varying judgments of successive Lord Chancellors—Present arrangement for issuing Commissions;* 2. *In Criminal cases — Distinction between right and wrong. The different forms of Unsoundness of Mind—Simplification introduced by the French and Germans — Tabular view of the principal forms:* 1. *Idiocy and its characteristics;* 2. *Imbecility — How far consistent with a disposing memory and understanding—Remarkable trial in illustration.*

With the present lecture I open a new and very important division of the course. We have hitherto considered man either with reference to structure simply, whereby the requisite characters of age, sex, variety, and identity, are determined; or we have contemplated him in regard to the exercise of certain functions, chiefly those of reproduction; but always as in the enjoyment of *health*. The scene changes, and we shall now proceed to view the human being as the subject of *disease* or *injury* which may possibly give rise to questions in courts of justice.

In treating of diseases, we shall have to notice those of the mind as well as of the body; and even give the precedence to the former, as well for other reasons, as because of their superior medico-legal interest. In the remarks and illustrations which shall presently be offered, proof enough will be adduced of the extreme complexity and difficulty of the subject; nor should you be ignorant that it has proved a quicksand of late years, on which more than one medical reputation has been wrecked.

Medico-legal psychology. — It has been sometimes questioned whether medical men (probably from their being found so frequently at fault) have any title to be considered as essential referees on inquiries respecting soundness and unsoundness of mind,—whether, in fact, they have better means of being well informed on the subject than any other well educated members of society. In Germany the question has been discussed with much energy and heat; some of the disputants maintaining that the tribunals should be guided solely by medical men, others vindicating that prerogative for the pure philosophers of mind. Metzger distinguished himself as one of the chief advocates of the former, Kant of the latter, opinion. But each took an extreme view of the case, and, as often happens, overlooked the truth lying between; neither party was exclusively right, but the preponderance certainly was towards the medical side, and for these reasons:—

1. Because the philosophers are purely theoretical, while medical men study psychology as a mixed science—that is to say, they keep in view the connexion of mind and body. 2. Medical men have by far the best opportunity of personally observing the phenomena of mental disorder. And 3, because in most cases, if not in all, the unsoundness of mind depends on some physical cause. For the thorough investigation of the subject, therefore, the medical man is best qualified by reason of his practical as well as general attainments; and *à fortiori*, when he has made mental disease a principal, or a special study.

UNSOUNDNESS OF MIND.

I use the purely English denomination, unsoundness of mind, as comprehending all the varieties and deviations from the ordinary rational standard which are commonly met with. Like the French *aliénation mentale*, (but with more propriety) it embraces idiocy and imbecility, as well as the various forms of derangement. But as Lord Coke, and some of our highest law authorities, have pronounced the term *non compos*, or *insanæ mentis*, (literally, of unsound mind) to be the most sure and legal, there can be no hesitation in adopting it as the generic term.

Legal distinctions and decisions respecting unsoundness of mind.—What is said in Coke Littleton on the varieties of mental unsoundness is worth quoting in the first instance.

"*Non compos mentis* is of four sorts: 1, *Idiota*, which, from his nativity, by a perpetual infirmity, is *non compos mentis;* 2, He that by sickness, grief, or other accident, wholly loseth his memory and understanding; 3, A lunatic, that hath sometime his understanding, and sometime not, *aliquando gaudet lucidis intervallis*, and therefore he is called *non compos mentis*, so long as he hath not understanding. Lastly, he that by his own vicious act for a time depriveth himself of his memory and understanding, as he that is drunken."—*Coke, Littleton*, 247, *a*.

A person who labours under unsoundness of mind is not contemplated by the laws as other people are: he is not held responsible for his actions. If he possess property, it may be taken out of his hands; at least he may be deprived of the management of it. If he marry, the marriage is not valid; if he make a will, his executors are not bound by it. Again, if such a person commit an act of aggression, or violence, it is not imputed to him as a crime; he is acquitted of the guilt on the ground of insanity.

But the proofs of insanity required in civil and criminal questions are very different; for which reason it will be necessary to consider them separately.

In all cases coming before the tribunals, the question of unsoundness is ultimately determined by the verdict of a jury, and that in most instances turns on the evidence of medical witnesses.

In civil cases.—"An idiot, or natural fool," says Blackstone, "is one that hath had no understanding from his nativity; and therefore is by law presumed never likely to attain any." For which reason the custody of him and of his lands is given to the King, by whom it is entrusted to the Lord Chancellor.

In the old common law there is a writ *de idiota inquirendo*, to inquire whether a man be an idiot or not: which must be tried by a jury of twelve men: and, if they find him *purus idiota*, the profits of his lands and the custody of his person may be granted by the king to some subject, who has interest enough to obtain them.

A man is not an idiot (continues Blackstone), if he hath any glimmering of reason, so that he can tell his parents, his age, or the like common matters. But a man who is born deaf, dumb, and blind, is looked upon by the law as in the same state with an idiot; he being supposed incapable of any understanding, being destitute of those sources by which the human mind is furnished with ideas.

A lunatic, or *non compos mentis*, is one who hath had understanding, but by disease, grief, or other accident, hath lost the use of his reason. A lunatic is indeed properly one that hath lucid intervals: sometimes enjoying his senses, and sometimes not, and that "frequently depending upon the change of the moon." But under the general name of *non compos mentis* (which sir Edward Coke says is the most legal name) are comprised not only lunatics, but persons under frenzies, or who lose their intellects by disease; those that *grow* deaf, dumb, and blind, not being *born* so; or such, in short, as are judged by the Court of Chancery incapable of conducting their own affairs. To these also, as well as idiots, the king is guardian, but to a very different purpose. For the law always imagines, that these accidental misfortunes may be removed; and therefore only constitutes the crown a trustee for the unfortunate persons, to protect their property, and to account to them for all profits received, if they recover, or after their decease to their representatives.

On the first attack of lunacy or other occasional insanity, while there may be hopes of a speedy restitution of reason, it is usual to confine the unhappy persons in private custody under the direction of their nearest friends and relations: and the legislature, to prevent all abuses incident to such private custody, has frequently thought proper to interpose its authority by statutes, particularly 9 Geo. IV. c. 40 and 41, regulating mad-houses. But, when the disorder is grown permanent, and the circumstances of the party will bear such additional expense, it is proper to apply to the royal authority to warrant a lasting confinement.

The method of proving a person *non compos* is very similar to that of proving him an idiot. The lord chancellor, to whom, by special authority from the king, the custody of idiots and lunatics is entrusted, upon petition or information, grants a commission in nature of the writ *de idiota inquirendo*, to inquire into the

party's state of mind; and if he be found *non compos*, he usually commits the care of his person, with a suitable allowance for his maintenance, to some friend, who is then called his committee. However, to prevent sinister practices, the next heir is seldom permitted to be this committee of the person; because it is his interest that the party should die. But it hath been said, there lies not the same objection against his next of kin, provided he be not his heir; for it is his interest to preserve the lunatic's life, in order to increase the personal estate by savings, which he or his family may hereafter be entitled to enjoy. The heir is generally made the manager or committee of the estate, it being clearly his interest by good management to keep it in condition, accountable however to the Court of Chancery, and to the *non compos* himself, if he recover, or otherwise to his administrators*.

But when we come to inquire on what principle the writ *de lunatico* is granted, we find that it depends, for the most part, on the discretion of the Lord Chancellor for the time being. One grants it, as is now usually the practice, in cases of imbecility or weakness of intellect, but another has strenuously refused to consider a case of this kind as coming under the distinction of *insanæ memoriæ*.

The following decisions of Lords Hardwicke, Eldon, and Lyndhurst, will exemplify the differences of opinion which have prevailed among eminent judges during the last half century: — "In *ex parte* Barnsley, upon a petition to quash an inquisition, finding the petitioner, from the weakness of his mind, incapable of governing himself, his lands and tenements, the petitioner's counsel observed that there were but two distinctions in law, viz. idiocy and lunacy; and although the latter had been since described by other words, *i. e. non compos mentis*, *insanæ memoriæ*, of unsound mind and memory, yet that the words only were changed, and not the law.

"Upon which Lord Hardwicke observed that it was so, and that nothing could change the law therein but an act of parliament. *Non compos mentis*, or, since the proceedings have been in English, 'of unsound mind,' which mean the same thing, are legal terms of a determinate signification, understood by courts of law, importing not weakness of understanding, but a total deprivation of sense. God forbid! continued his lordship, that weakness of mind only, should be a sufficient reason for granting the custody of persons and their estates, for that would take in violent people, drunkards, careless, and silly: and the material part of the traverse is, not to the incapacity of judgment, but to the more material words of unsound mind, or *insanæ memoriæ*, which all persons must understand to be a depravity of reason, or the want of it; but weakness does not carry that idea along with it, and would be expressed in Latin by *infirmitas mentis*, rather than *insanitas mentis*. In the notion of the old writs, a person must be found either idiot or lunatic; and the courts enlarged the manner of finding, to avoid the difficulty of obliging the jury to find express lunacy, when they might think the case rather that of idiocy. If a man is so weak as to be imposed upon in the execution of a deed by the artifice of another, or spends his money foolishly, or weakly, he does not come within the meaning of the law in cases of this sort; but if men or women, through the weakness of their minds, are drawn in to execute conveyances by fraudulent means, they are relievable in the Court of Chancery; and bills are frequently brought by such persons to avoid their acts, on the ground of fraud. Commissions of lunacy are not intended for such men; their relief is by decree*."

But Lord Eldon, from the same bench, pronounced a very different opinion: — "Of late (says his Lordship) the question has not been, whether the party is absolutely insane; but the court has thought itself authorized to issue the commission, provided it is made out that the party is unable to act with any proper and provident management, liable to be robbed by any one, under *imbecility* of mind, not strictly insanity, but, as to the mischief, calling for as much protection as actual insanity. In the case of Mr. Charles Palmer, he was not insane, but his mind, by years and attention to business, was worn out. Epileptic fits, too, may produce a mind in the same state at a much earlier period. Such cases, therefore, have been thought proper subjects of this writ — *de lunatico inquirendo*. In another recent case, the commission stood upon the same principle. The party, when he could be kept sober, was a very sensible man, but in a constant state of intoxication he was perfectly incapable. No one can look at the present case without seeing that every person about this lady is satisfied that some care should be thrown round her. If clearly it is fit to protect her against executing powers of attorney, that she should not decide where her person, or with what trustees her property ought to be, all agreeing that she should not choose the persons who are to have the care of her property, it is fit for me to put a control upon those who may be proper persons to have the control of her property. I will not subject her now to another commission, but will direct two physicians, who have not been concerned and consulted, to see the evidence, and afterwards

* 1 Blackst. Comm. 302, *et seq.*

* Collinson on Lunacy, p. 61.

in the most tender manner to find the means of visiting her without alarming her, for the purpose of determining whether her state of mind is competent to the management of her affairs, for this does not seem a case of insanity; and I should think myself bound to do this, if it was only made out that it is not fit she should have the management of her pecuniary affairs*."

We shall now contrast a judgment of Lord Lyndhurst's. After citing the preceding decision, his Lordship proceeds:—"The law, as thus stated, has been acted upon for years; it has been acted upon in the view of the legislature; the legislature has not thought proper to interpose; and we must therefore take the law to be as thus expounded. Yet I think it unsafe that this verdict† should stand. The finding here is similar to what was found in Cranmer's case. There the verdict was, 'that H. C. was so far debilitated in his mind as to be incapable of the general management of his affairs.' What did Lord Erskine say on that occasion? 'How can I tell what is *so far* debilitated in his mind as not to be equal to the general management of his affairs? Suppose he was a farmer, and his understanding was so far debilitated that he could not manage his farm, though competent to common purposes.' What are the affairs to the management of which he is incompetent? Those affairs may be of such a nature that a certain degree of impairment of memory may render him incompetent to the management of them, and yet he may not be of unsound mind. The inference of the jury—'and consequently he is of unsound mind'—does not satisfy me—it does not follow necessarily from the premises: I cannot, therefore, allow the verdict to stand‡."

It is satisfactory, however, to be able to add, that a recent enactment has put an end to much of the ambiguity which thus prevailed respecting weakness of intellect. The statute 1 Wm. IV. c. 60, relative to trustees and mortgagees, has introduced a power to issue a commission of lunacy in all cases where an individual is "incapable of managing his affairs," although he be neither proved to be an idiot nor lunatic.

In criminal cases.—The law is more precise and determinate in laying down the grounds of responsibility or irresponsibility for crime. The statute 39 and 40 Geo. III. c. 35, enacts, that when, upon the trial of a person charged with treason, murder, or felony, it shall be given in evidence that the prisoner was insane at the time of the commission of the offence, and such person shall be acquitted, the jury shall be required to find specially whether such person was insane at the time of the commission of the offence, and to declare whether the acquittal has been in consequence of such insanity; and if they so find, the prisoner is to be kept in custody till his majesty's pleasure is known. But in order to prevent the jury from being embarrassed by technicalities respecting the import of the term *insane*, the question which is usually presented to them in all such cases, is, whether at the time the alleged criminal act was committed, the prisoner was *incapable of judging between right and wrong*, and did not then know that he was committing an offence against the law of God and nature?

Thus should it appear that the accused possessed such capability, although the mental delusion might be connected with the crime, and have stimulated him perhaps to commit murder in revenge for an imaginary injury, yet, being shewn to be capable of knowing that he had no right so to revenge himself, he must be held criminally responsible.

The different forms of unsoundness of mind.—The want of definitions and of precise appellations is no where more seriously felt than in treating of the various forms of mental disease. We have seen in the short sketch just given, of the legal distinctions respecting unsoundness of mind, how vaguely the several terms *lunacy*, *unsound memory*, *imbecility*, &c. are employed even by the bench; and it is a general complaint that lawyers take no pains to fix the meaning of expressions which they so commonly use: they seem, indeed, more inclined to secure for themselves a convenient latitude in this respect, so that when they please they may, as it were, play fast-and-loose with the medical witnesses, badgering them (as we too often see them do) to state minutely what is to be understood by such negative denominations as *unsoundness* or *insanity*, when they themselves would with much more propriety endeavour to fix the ideas comprehended under the positive term *soundness* of mind. In the end this probably will be done, and the example has already been set by eminent legal authorities on the continent; but meantime we are not to remain idle, expecting such a consummation: medical men are deeply interested in procuring all the light that can be had on the subject, and from them, no doubt, will be ultimately derived all that information which is requisite to guide and determine the construction of our common and statute law.

Unsoundness of mind, as including every

* 8 Vesey, Ridgeway *v.* Darwin.

† The verdict was, "that the party was not lunatic, but partly from paralysis, and partly from old age, his memory was so much impaired as to render him incompetent to the management of his affairs, and consequently that he was of unsound mind, and had been so for the term of two years."

‡ 4 Russell Rep. 183.

remarkable deviation from the ordinary healthy standard, is obviously a term of wide application; but as in regard to bodily disease we have our classes and orders to refer to, whereby each individual case can be readily recognized, so in determining the nature of particular instances of mental disease, we have an arrangement which seems well adapted to serve our purpose.

To the French and Germans we are much indebted for their psychonosological labours; they have simplified a subject which was hitherto all chaos; they have supplied us with a nomenclature at once adequate and perspicuous; and they have already, we may say, so far displaced the old system of confusion, that in treating henceforth of mental disorders it will be possible for authors to be generally intelligible, without using terms in senses peculiar to themselves. Only a few years since, it was necessary, in proceeding to peruse the remarks of any English writer on insanity, to settle in the first instance in what sense he employed his terms; for it was sure to be different from that of any one else even of his contemporaries: but of late a uniformity has begun to prevail, which cannot but be attended with the most beneficial results.

Medical jurists ought to be well acquainted with the prominent characteristics of the several forms of mental unsoundness.' I shall here offer a sketch which will be found useful in appreciating the features of the leading varieties; but first let me call your attention to this table, which exhibits at a glance the relations of the different forms to each other:—

TABULAR VIEW
OF THE
PRINCIPAL FORMS OF UNSOUNDNESS OF MIND.

- UNSOUNDNESS OF MIND.
  - DEFICIENCY of mental power.
    - IDIOCY ..... Congenital—with little, if any, development.
    - IMBECILITY .. From arrested development—perhaps with some congenital defect.
    - IMBECILITY .. The deaf-and-dumb state.
  - DERANGEMENT, or Alienation of mental power.
    - INSANITY; with excitement.
      - MANIA, or General insanity.
        - With fury; *Furor.*
        - Without fury.
      - MONOMANIA; Partial insanity.
        - With depression; *Melancholia.*
          - Demonomania.
          - With terror.
          - With pride.
        - With hilarity or cheerfulness.
          - Theomania.
          - Erotomania.
          - With vanity.
    - DEMENTIA, or Fatuity; the mind broken down.
      - Consecutive on some other form of derangement.
      - From Epilepsy, &c.
      - Senile; *Dotage.*

This arrangement explains itself. Unsoundness of mind, the generic term employed as "the most safe and legal," is in the first instance considered as consisting either in deficiency or derangement—the mind having never attained, or having departed from, the ordinary sound state. Deficiency of mind is then divided according as it arises from congenital imperfection, or from some obstacle supervening which permits only of a partial development. We have thus the two forms of idiocy and imbecility.

In derangement, the mind may be looked upon either as morbidly excited, or as having its powers abated: hence we arrive at the several forms of mania, monomania, and the different kinds of dementia. Mania, again, is distinguished according as it is attended with fury or not; and monomania, as it exhibits a depressed condition or the reverse.

Of some of these varieties it will be necessary to offer a more detailed description, and particularly of the following five—namely, idiocy, imbecility, mania, monomania, and dementia. By making ourselves familiar with their characters, we shall find our task of distinguishing and classifying particular cases submitted to us, will be materially facilitated.

Idiocy—its characteristics.—Absolute idiocy, for it admits of some slight degrees, is always connected with more or less of personal deformity or disease. The head is generally remarkable for its disproportion to the stature—sometimes extremely small, with retreating and narrow forehead, sometimes voluminous, with obtuse facial angle; the features are heavy, often hideously ugly; the eyes meaningless; the smile stupid. The body is mostly short and ill-shaped, very thin, or very fat. In regard to mental power, the little portion of mind which the idiot possesses is almost a perfect blank; there is no understanding, no faculty of articulate speech, a few parrot-like words probably are the utmost that can be uttered. The will is in similar abeyance, no emotions, no desires, scarcely even an instinct. Where the idiocy is not so thoroughly deplorable, there are some slight glimmerings of ideas of sense, and of feelings of pleasure and pain; sometimes even a trace of gratitude towards a kind keeper may be observed.

Cases of this description can scarcely give any difficulty to the medical jurist; being congenital, and their history known, there is commonly no mystery about them. It might so happen, however, that in some isolated instance an attempt at imposture might be made: not that a person who had already been known to enjoy reason could well put on this form of unsoundness—for it were a clumsy character to assume—the broken down mind, such as his should be, displaying the lineaments of dementia, not those of idiocy: but some wandering impostor might endeavour to play the arrant fool for some mischievous purpose. Where there is reason for suspicion of this kind, seclusion and secret watching of the party would soon afford evidence of his real state.

Imbecility.—This is a state of mind which often affords ample room for discussion and litigation. The imbecile possesses only a limited portion of mental power: his intellectual and moral development has proceeded only to a certain extent—some bodily disorder then probably interfering, or his original stock of mind being capable of cultivation no further. Some, however, are capable of a considerable degree of intelligence,—may be taught certain mechanical trades; some can even learn to write, or to read, and perhaps may be made to comprehend the rudiments of arithmetic. But almost every thing they do is performed in a slovenly, unfinished manner. They are destitute of a reasonable degree of attention; their memory is accordingly very imperfect, and their powers of comparison and association most limited.

We often observe marked shades of variety in the imbecile: a propensity to music and mimickry is sometimes displayed; and while some are extremely peaceable and orderly, others are cunning—given to theft, and sometimes carried away even to acts of assassination. Their passions are frequently violent and unmanageable: grief also, and the appearance of strong religious feeling, have been noticed among their characteristics.

The great difficulty attending these cases in medico-legal practice is to trace out the limits whereby persons of this class are distinguished from others who are competent to regulate their social and moral conduct. In criminal trials there is reason to believe that imbeciles have often (not so often, however, in this country as on the continent) been found *guilty*, where they were really not responsible; and in civil suits, the decision of the validity of acts done by the imbecile has sometimes turned on points perhaps scarcely comprehensible by the jury themselves who pronounced the verdict.

An example of the latter kind is afforded by a remarkable trial which took place not long ago on the Western Circuit. It was an action to set aside a will made by a young woman (Frances Smith) of weak mind: the heir at law was plaintiff, the legatee (Ann Smart) defendant. Counsel on either side admitted that there was imbecility in the case; but the question was whether it existed to such an extent as to incapacitate for making a will,—whether, in fact, the testatrix possessed a "disposing memory," so as to be able to bequeath her property with understand-

ing and reason. Much evidence was adduced on both sides, for it was necessary to inquire into the whole tenor of her life: a witness was produced who was present at her birth, and various others testified to her habits during her girlhood and married state.

Frances, or Fanny Smith was a farmer's daughter; her head was misshapen at birth, owing to some injury received during delivery; and she very early exhibited signs of inferior intellect; she required assistance in all the common affairs of life, was uncleanly in her person, and very simple minded. Her proper station seemed to be in the farm-yard, where it appears she often used to work hard with her mother. Many of the farm labourers and rustics gave a pretty fair account of her understanding, according to their ideas of sound mind; but the Rev. Mr. Benson, the clergyman who celebrated her marriage, while he considered her capable of entering into the married state, and even of disposing of her property, admitted that her appearance induced him to think she was weak in her intellect, and "a very weak person."

The evidence of the solicitor who drew her will and attested a previous execution of a mortgage deed, was strongly in favour of her "diposing" capacity; but he went so far as to say that there was nothing even in her countenance to indicate weakness of mind. Dr. Grove, too, a physician who saw her relative to an insurance on her life, thought she was competent to make a will; but he stated in his certificate that she had a degree of eccentricity of mind, though nothing approaching to anxiety.

On the other hand, in addition to abundant testimony regarding the slovenly, uncleanly, childish, and unmeaning habits of the testatrix, it was proved that at school, where she was sent at the age of 10, she had not the capacity of a child of five,—she could scarcely be taught any thing: it was impossible to teach her to sew—yet she learned to write a little.

Mr. W. H. Coates, surgeon, of Salisbury, gave evidence to this effect:—"I attended Fanny Smith at times, from 1819 till her death, during which period my attention was drawn to her mind. No one could attempt to converse with her without seeing that she was imbecile in a low degree. I gave a certificate in 1828 and 1829, after I had considered the state of her mind: those certificates state she is very nearly an idiot. I examined her a third time, with Dr. Finch, at my house. I put questions to her. We first wished to ascertain whether she understood the nature of disposing of property, but we could not discover that she did. I put down a few figures which a child of six years could sum up, but she could not do it. She was incapable of doing simple addition. I should say she was incapable of any important transaction. She did not appear agitated or confused. She continued in the same state to the time of her death. I performed an operation on her breast; I then remarked that she expressed no sensation of pain, and at her confinement she did not exhibit the same feelings as other persons. There was a defect of sensibility, which frequently accompanies a defect of mind.

"Cross-examined.—Women suffer pain better than men. She scarcely made answers to any of our questions. I think those she did give were not rational. She possessed some mind, but of a very inferior description.

"Re-examined.—She had not a mind to protect herself from fraud. I put the ordinary tests to ascertain the state of her mind."

Dr. Finch was next examined.

"I am a physician, and have kept a lunatic asylum for thirty years. I attended with Mr. Coates, and the certificate describes my opinion.

"Cross-examined.—An idiot can have no idea of numbers, or of the value of money."

The trial lasted four days. In his address to the jury the learned judge (Mr. Baron Gurney) commented at considerable length on the evidence "The law," he said, "had been correctly stated, that it was not requisite on one side, in support of the will, that it should be made out that the person was an idiot; and it was stated on the other side, that it was not requisite to establish that the person was of superior understanding, or even of the average understanding of mankind. But there must be mind, there must be memory, there must be judgment; and it was for them to say, upon the examination of all this evidence, whether this woman, Frances Smith, had a disposing mind, memory, and understanding. The case was one of the most extraordinary nature, for the evidence on one side and the other was most completely at variance; the one placing her understanding perhaps higher than it ought to be, and the other putting it possibly lower than it ought to be; but it was confessed that she was a person of very weak mind, and they were to say to what extent that weakness went, whether it was that degree of weakness which incapacitated her from the disposal of her property by will; and there was this remarkable observation to be made, that the greater part of the witnesses in the lower class of life, in support of the will, stated that she had no weakness at all. On the

other hand, the witnesses against the will placed her low, very low indeed. They had to contrast this; and it was for them to decide which was correct."

The jury, after a short consultation, returned a verdict for the *defendant*—that is to say, for the validity of the will*.

CASE OF

OBSTRUCTED URETER;

WITH ULCERATION OF THE KIDNEY AND ABSCESS.

By Robert Allan, Esq.

Staff Assistant Surgeon.

John Gourlay, private in the detachment 29th Regiment, stationed at Black River, aged 30; a native of Stirling (N.B.), of robust constitution, nine years in the tropics, and addicted to the free use of ardent spirits; went to bed in his usual good health on the evening of the 4th October, 1835, and awoke about three o'clock in the morning, complaining of violent pain, increased on pressure, in the site of the descending colon. Pulse 104, full; skin moist; thirst. He voided small quantities of urine, highly tinged with blood, every few minutes.

Venesectio ad ℔ij. Fomentat. abdom. frequenter. Hab. Ol. Ricini, ℥j.

The blood was buffed and cupped; and about noon the pulse fell to 98. Having vomited the castor oil, a stimulating enema was thrown up. The pain ceased, and he slept two hours; it, however, returned at intervals during the day, while the abdomen became tumid, and tender on pressure. He slept several hours in the following night, but on the morning of the 6th suffered more severe abdominal pain, with the pulse 100, very full; skin hot and dry; less blood in the urine.

Rep. Venesectio ad ℔ij. Hab. Sulph. Magnesiæ, ℥j; et injec. Enema Cathartic.

The bleeding produced syncope, and the cathartic operated twice. In the evening the pain shifted towards the left loin, and the pulse was 106, feeble.

Hab. Haust. Anodyn.

He passed a sleepless night; and on the 7th the pain was very severe about the sigmoid flexure of the colon. He obtained relief by bending the body forwards. Ardor urinæ; urine very bloody. Pulse 114, weak; bowels slow.

Descend. Baln. Tepid., et hab. Sulph. Mag. cum Carbon. Magnes.

In coming out of the bath he voided, per urethram, a triangular piece of gravel, the size of a split pea, after which he felt much easier, and slept a few hours. Pulse rose to 120, and the cathartic operated. He now complained of pain in the left testicle. In the afternoon the urine was voided perfectly clear, and without pain. Pulse 100.

During the two following days the pulse remained about 100. He had a few slight attacks of abdominal pain; urine natural. Warm baths, and frequent doses of nitrous æther, were administered.

On the evening of the 9th the pain returned suddenly, and with great violence, in the course of left ureter, extending to the testicle and orifice of the urethra, while no change of position brought the slightest relief. There was cold clammy perspiration, and tumid abdomen; urine clear, and in moderate quantity. The pain and fever diminished in a few hours.

From the above date a swelling was observable in the left iliac region, which daily increased, and the discharge of urine diminished. The bowels required to be frequently stimulated. He continued to pass sleepless nights, and there was great anxiety, while the pain in the tumor sometimes increased considerably. The stomach became irritable, and his strength declined rapidly. Emollient poultices were applied to the tumor, and opiates nightly administered.

On the 30th the tumor was very prominent at the left linea semilunaris, and there was a prickling pain; pulse 96, soft; urine of natural colour, but voided in small quantities.

Taking into consideration the extent of the swelling, which threatened to burst into the abdomen, the many sleepless nights and consequent exhaustion, it was advisable that an attempt should be made to give exit to the contents of the tumor without delay; and Dr. Stewart (assistant-inspector of hospitals)

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* An excellent report of this trial may be found in the *Times* newspaper of March 16, 1835.

having arrived from head-quarters, on the 31st October the following operation was performed :—

The skin, cellular membrane, and abdominal muscles, were divided to the extent of an inch and a half, in the direction of the fibres of the internal oblique, and about two inches distant from the crest of the ilium, in the line of the umbilicus, and on the iliac side of the apex of the tumor, with the view of keeping clear of the peritoneal cavity. The fascia transversalis appearing tense, a large trocar and canula were thrust through it ; the trocar being withdrawn as the canula was pushed in. Seven pints of urine flowed out, all of which, with the exception of the last few ounces, which were gelatinous, and evidently the exudation from an inflamed surface, was perfectly clear. An elastic-gum tube was introduced, and the canula withdrawn; adhesive straps, compress, and bandage, applied.

In a few hours after the operation he complained of uneasiness in the wound, caused by the point of the tube; the pulse rose to 120, and he voided some clear urine by the urethra. The severe pain and tension were completely removed, and he slept the greater part of the following night.

On the third day after the operation, the elastic-gum tube was withdrawn, as nothing had passed by it. He voided urine in small quantities frequently, and with burning pain; pulse 120, and abdomen rather tense.

On the 3d November he vomited repeatedly, and the abdomen was much swollen. Pulse 122, very feeble.

Hab. Mist. Camphor. frequenter.

On the 4th there was constant vomiting and hiccough, while the swelling in the iliac region was as great as before the operation. The trocar and canula were again introduced through the wound, and six pints of clear urine came away, which was followed by the slow discharge of two pints of well-formed pus. An elastic-gum tube was retained in the wound.

The report on the evening of the 4th, states, that " a considerable quantity of clear fluid and pus came along the tube, at frequent intervals, during the day; vomiting ceased, and he slept a little; pulse 120."

Emaciation and debility increased rapidly; he had no appetite; the discharge of urine from the wound averaged two pints and a half, with one of pus, in the twenty-four hours,—while the urine by urethra amounted to a pint. Bowels required to be kept open by laxatives.

On the 13th November a large elastic-gum catheter was passed by the wound eleven inches and a half, and retained there a few minutes.

The appetite improved, and, owing to the emaciation and great discharge of pus, his diet was increased. He now had chicken soup, two eggs, and a pint of porter, daily, and took sulphate of quinine with sulphuric acid.

At this time he was in an extreme state of debility, and had an ulcer on the sacrum from pressure; pulse 120, but he slept tolerably well.

About the middle of December the quantity of pus began to diminish,—the appetite continued to improve, and his mind became easy.

Anxious to ascertain if the ureter was pervious (for it was imagined that the opening led into it), an elastic-gum catheter was again introduced by the wound eleven inches, and a pint of milk and water injected with considerable force, none of which entered the bladder, but flowed back by the side of the instrument.

A gradual and very visible improvement was going on in his general health, and about the end of December he was able to sit up an hour daily.

There were several symptoms of stone in the bladder, such as ardor urinæ, and great pain at the meatus urinarius while voiding the last drops of urine, along with a mucous deposit. He was sounded; the instrument gave great pain in passing the prostatic portion of urethra, but no stone could be felt.

In January he remained out of bed two hours daily, and was able to walk about the room; appetite continued good, and the pus from the wound did not exceed four ounces in the twenty-four hours. Sometimes very little urine came by the wound, while the quantity per urethram was increased; for instance, it is reported on the 9th January, that "only three ounces of urine, with four of pus, flowed by the wound, and six pints of pale urine by urethra, during the last twenty-four hours; pulse 114 ; thirst ; bowels regular. The elastic-gum tube is still in the wound."

On February the 11th, it is noted that "he sleeps well; pulse 128, feeble; thirst; skin hot and dry; appetite very bad; has not been gaining strength for some time past; feet œdematous. From two to three ounces of pus discharged by the wound daily."

Towards the end of February he suffered a smart attack of dysentery, but under the use of blue pill with opium, and small doses of castor oil, the severe symptoms subsided in a few days.

Emaciation and debility again increased; appetite fell off; he had griping, tenesmus, and vomiting. The urinary affection underwent no change, but he was so weak that he could not sit up even in bed. On 8th and 9th of April he voided a quantity of muco-purulent matter by stool; on the two following days the stools were yellow and thin. He sank rapidly, and died on the evening of the 11th.

Post-mortem examination. — Body much emaciated; no disease in the head.

Chest.—Both lungs attached to the pleura costalis by old adhesions.

Abdomen.—Peritoneum natural, except over the left kidney and lumbar muscles, where it was of a dark blue colour. This kidney, which was enlarged to twice its ordinary size, adhered strongly to the surrounding parts; its tubular portion was destroyed, or converted into little cells, having a common communication with the pelvis of this organ, and opening besides, by ulceration in the cortical substance at two points, into a sac capable of containing a pint, occupying the cellular membrane in the lumbar region. The mucous lining of the kidney was thickened by inflammation, and the commencement of the ureter similarly changed in structure, and completely closed at this point by coagulable lymph, while in the remainder of its course it was contracted, but pervious. An elastic bougie inserted by the external wound, after taking a direct course for two inches centred in close contact with the outer surface of the peritoneum, turned up into the abscess behind the kidney. Right kidney of ordinary size, but paler than usual; its ureter natural.

Bladder small; mucous coat inflamed; and two superficial ulcerations near the fundus.

Mucous membrane of descending colon and rectum slightly inflamed, softened, and covered with pus.

There are several points in this case worthy of remark, and a few of which it will be difficult to give a satisfactory explanation. The sudden attack, and bloody urine from the commencement, until he voided per urethram a small calculus on the third day. There can be little doubt that the passage of this stone caused the pain and hæmorrhage; and the symptoms which supervened would have led us to imagine that the ureter was blocked up, either by another calculus or coagulable lymph, but the appearances on dissection fully prove it was the latter which caused all the disturbance which followed. He had no pain in the loins during the first eighteen days, although the tumor was very manifest between the false ribs and crest of the ilium on the 5th; at this time the urine was probably contained in the kidney, and the consequent inflammation terminating in abscess behind that organ, may account for the pain becoming acute in the lumbar region after such a lapse of time*.

The patient lived five months and eleven days after the operation, without any great degree of suffering, and might have existed for years with a urinary fistula, if the continued discharge of pus and the dysenteric affection, coming on when in a debilitated state, had not exhausted him.

Port Louis, Mauritius,
June 14, 1836.

CASE OF
LEPRA AND PSORIASIS,
TREATED
WITH SULPHUR FUMIGATIONS.

To the Editor of the Medical Gazette.

Sir,

With some hope of reclaiming for fumigatory baths that justice which is indis-

* Dessault observes, "ces depots ne se manifestent au dehors que lorsqu'il s'est fait dans les cavités du rein une crevasse par laquelle l'urine et le pus se sont épanchés dans le tissu cellulaire, et y ont formé un nouveau foyer qui a usé ou détruit en partie les muscles abdominaux. Alors il n'est pas rare de voir paroitre dans les lombes, entre les fausses côtes et le rebord de l'os des isles, une tumeur circonscrite plus ou moins volumineuse."—*Traité de maladies des voies urinaires.*

putably their due, I send you briefly the treatment and results of an obstinate case of skin malady lately under my care.

The subject, a lady aged about 24 or 25, had been afflicted for upwards of nine years. The limbs and body were covered with leprous round spots, from the size of a crown to that of a shilling, with raised red edges, depressed in the centres, and covered with scales. In some parts were large patches of psoriasis, irregular in shape and at the edges, not depressed in the centre, but surmounted by thick scales. The face, and palms of the hands and feet, were the only parts of the body exempt from the disease. The general health had always been remarkably good, save a proneness occasionally to severe headaches. This long-standing disease had come on in the first instance without any appreciable cause, but underwent some diminution in degree during the summer months. The skin was unperspirable and stiff with this encasement, but the itching by no means so distressing as in those assailed with prurigonous diseases — that is, those of the order papulæ, exanthemata, &c. &c. The health, as previously stated, was good; she was quite a stranger to functional derangement, or stomach complaint. I particularize the latter, as that organ has so often to bear the onus of being the cause, or at least the cause of the continuance, of many of these complaints; whilst on the contrary, in cases of lepra and psoriasis, I have commonly found the stomach in an enviable degree free from dyspeptic ailment. This I know to be at variance with the recorded opinions of most, if not all, writers on the diseases of the skin.

After this statement, an apology may seem needful for the medicines that were ordered in this case, in conjunction with the fumigating baths. In short they were ordered *empirically*, in the hopes that they might occasion or assist in effecting that change or alteration in the system which in the end might prove beneficial to the patient. The lady commenced by taking half a dozen simple vapour-baths, with the view of softening the surface, lessening the tension, and detaching the scales; and this was effected. She then took a usual purgative dose, and the next day commenced with the sulphur fumigation, and the following medicines:—

℞ Liq. Hydrarg. Oxymuriat. ℥ij.; Potassæ Hydriodat. gr. xxxij.; Spt. Cinnam. ℥j.; Aquæ Distill. ℥v. M. sumat cochl. magnum, mane nocteque.

The fumigations were taken, almost without interruption, one daily for six weeks, the time the lady remained under my care; and to the patches of psoriasis, and the most unyielding of the leprous spots, she used an ointment composed of one drachm of the hydriodate of potass to an ounce of grease, applied night and morning. I omit dates in this detail, as needless, occasioning prolixity, and occupying more space than you can allow.

At the end of six weeks the lady returned to the country, greatly amended; and, on her arrival at home, was to leave off the medicine and application, and substitute for them the following:—

℞ Liq. Arsenical. gtt. xviii.; Liq. Potassæ, ℥j.; Spt. Cinnam. ℥s.; Infus. Aurantii, ℥viiss. M. sumat partem sextam bis die. Pil. Hydr. Submur. gr. v. omni nocte sumenda.

The dose of the arsenic to be gradually increased under proper guidance, and for the former ointment the following was substituted:—

℞ Hydrarg. Oxymuriat. ℈ij. pulv. substit. levegat. Vit. Ovi No. iij. Mist. Ceræ. ℥ij. M. To be used night and morning.

She was directed to adhere to the last prescription for a month, and then to leave it off and resume the former; thus alternating the medicines and applications, and which, I think, is often attended with advantage. At the end of two months I received the following letter from the parent of the young lady:—

"Sir,—The time having elapsed that you mentioned before you wished to hear from me, I now have great satisfaction in saying that your baths and treatment of my daughter's complaint have even exceeded our most sanguine expectations, and if it continues, will equal our greatest wishes. The spots have almost totally disappeared, leaving at present a little redness behind, which no doubt time will wear away. When I look back on the length of time she has had the spots, and the total failure of so many eminent medical men's attempts to remove them, I must confess I came to you certainly expecting some relief, but not with the most distant

hopes of a cure being effected; and I shall ever feel thankful that we came to London. She took the medicines as directed, and often uses the Jekyll steam bath, and finds it an invaluable comfort. The skin has peeled off, she thinks, two or three times," &c. &c. *

I do not send you this brief detail as embracing any thing novel in the complaint, but rather to show that by the properly-regulated administration of the sulphur fumigations, a commonly intractable form of disease *may* be made to yield in comparatively a short time, but which, under ordinary circumstances, will resist the most judicious means of treatment for a lengthened period, as in this lady's case.

When the sulphur, or other fumigations, are not well advised or well managed, they as often do no good; and by setting up a febrile state of the system, are frequently mischievous in their effects,—disappointing alike the patient and the medical adviser. Yet the fault rests not with the fumigations, but mostly with the adviser, in not duly preparing the patient for their use, or in the case being one for which at first the fumigations are too stimulating,—in short, inadmissible; and the latter I very often find to be the case.

These means are commonly advocated for diseases of the skin generally speaking; yet disappointment in the results will always follow in cases of eczema and prurigo, when proper treatment, as rest, mild diet, and perhaps bleeding or purging, has not been previously resorted to; and I do not hesitate to say, that for the successful treatment of various diseases by the fumigatory method, a practical knowledge of its effects, and of the best way of managing the apparatus, is as needful as a due knowledge of diseases and their remedies in any other cases where the art or science of medicine is called in aid.

Unquestionably it is a powerful therapeutic agent; and when any such means are misapplied, we ought not to be surprised if our own errors lead us to disappointment. I am led to these remarks in hopes that, through the influence of your excellent and widely circulating journal, they may tend to disabuse the fumigatory treatment from the ill report that now attends it, and which is spreading in this country; and which, if not rectified by medical practitioners themselves making it a subject of more consideration and interest to them, these excellent means of relief, not only for maladies of the skin, but for a great majority of other chronic complaints, will certainly be brought undeservedly into disrepute in England. How shall we, then, appear to our continental neighbours, opposed to this *methodus medendi;* whilst each succeeding year has shewn more and more the increasing estimation in which these remedial means are held in the treatment of diseases? Witness the astounding number of upwards of one hundred and eighty thousand of these baths, which have been administered annually at the Hospital of St. Louis alone, during the last three years; and the precision, discrimination, and order, with which they are administered, shew that the treatment after this method has become part of a regular system of therapeia.

What are we to expect, then, but disappointment, if not discredit, if any person, however deficient in the necessary knowledge, shall be allowed to assume to advise, and to administer, fumigating baths, and those baths improperly constructed, and mal-managed? Yet such is the case here; and at present I know but of one redeeming circumstance that tends to check this growing evil, and by which its otherwise baneful tendency is abated, viz. the knowledge, the constant care and attention; and, not the least circumstance, the expenses which are necessarily attendant upon the conducting of a correct fumigatory establishment, are such as to stamp with an almost certainty of failure every employment of the remedy where these essentials are wanting. And I cannot help expressing my conviction, that it is the duty of every medical man who recommends the employment of a powerful therapeutical agent, to assure himself that the agent is correct, and properly administered; and so protect his own reputation by shielding his patient from the consequences of its improper application.

I am, sir,
Your obedient servant,
JONATHAN GREEN.

40, Great Marlborough-Street,
March 6, 1837.

* Dr. Green has forwarded to us the original letter.—ED. GAZ.

STRICTURES ON CERTAIN PHRASES AND CONFLICTING OPINIONS,

IN LAENNEC'S CELEBRATED WORK.

To the Editor of the Medical Gazette.

SIR,

I PURPOSE, in the following paper, to make a few passing remarks on the work of Laennec, but without entering into many of those nice and difficult questions concerning which the most experienced auscultators frequently hold different opinions.

By placing together, under the eye of the student, some quotations remarkable for their extravagance, he will perhaps be more strongly impressed with the necessity of exercising a reasonable scepticism on this subject in general, than he would be by reading them separately. Those which contain contradictory opinions are naturally calculated to produce the same effect.

These considerations may serve in some degree as an excuse for the great proportion of Laennec's remarks introduced into this article. Had I contented myself with merely referring to them, there is little probability of their having been looked into so far as regards my present object.

They may serve, too, as a starting-point for future observations, more especially if any injudicious admirer of Laennec should attempt to defend him, or to follow his example in these respects. If some of the assertions contained in his work had not so utterly bid defiance to every thing like moderation, the task of criticism might have been an easier one; but what can be said in refutation of statements which might almost remind one of the extravagances of romance?

If I speak strongly on this subject, it is because I feel strongly, and know too well the great evil which may result from the manner in which auscultation has been presented by Laennec, not to mention many others who have assisted in injuring a really good cause, by putting forth exaggerated pretensions in its favour.

Introduction.

"Some of the signs given by mediate auscultation are very easily perceived (très faciles à saisir), and it is sufficient to have heard them once in order to recognize them ever afterwards. Of this kind are those that indicate ulcers of the lungs, great hypertrophy of the heart, fistulous communication between the pleura and the bronchi, &c.

Further on he says, "It is sufficient to have watched a disease two or three times to learn to recognize it with certainty; and the greater part of the affections of the lungs and heart are so common, that after having sought for them for a week *(pendant huit jours)* in an hospital, there will only remain a few rare cases to be studied, which, with few exceptions, will be met with in the course of a year if almost all the patients are examined with attention."

He admits that a medical man entirely devoted to private practice cannot be expected to follow an hospital for so long a time, but suggests that the physician should inform his "confrères" when he meets with any rare or interesting case. "In this way any practitioner may learn in a short time to recognize with certainty, not only the cases mentioned above, but also peripneumonia, pleuritis, latent catarrhs,—*the least rudiments of these affections.*"

Can the English language supply terms sufficiently strong to characterize the extravagance of the greater part of the preceding assertions?

De l'Inspection des Parois de la Poitrine.

On this subject the expressions of Laennec seem to have been strongly influenced by his own invention and highly valuable discoveries. With regard to phthisis in particular, the flattening of the upper part of the chest corresponding to the disease, and more especially, perhaps, the heaving of the shoulders, and the dragging up instead of the expansive motion of the ribs, ought seldom to leave much doubt as to its nature. After some attention to these points, the diagnosis may frequently be made with little difficulty, even through the ordinary clothing of the patient, especially when the shoulders are thrown back.

CHAP. II.—*On Percussion.*

It must be recollected that Laennec had in view *immediate* percussion. His remarks are excellent, although leaning to the side of severity. We shall hereafter see, that upon particular occasions he viewed this subject in a more fa-

vourable light, and seemed almost to forget that "practice, dexterity, and great attention, are requisite for obtaining accurate results by percussion" (la percussion ne donne de résultats exacts qu'autant que l'on y apporte de l'habitude, de la dexterité, et une grande attention.)

De l'Auscultation de la respiration.

After stating that in persons whose lungs are very healthy the respiratory sound is sometimes very weak, or almost inaudible, and mentioning some of the circumstances in which this occurs, Laënnec advises that in these and all other cases where that sound is very feeble, the patient should be made to cough, in order to produce a full inspiration; the same result being sometimes obtained by making him speak or read, and especially recite, some phrases consecutively.

These directions are very proper; but in attempting to act upon them, it will often be found difficult to make patients either cough, or speak, or read, or recite, in such a way as to produce an inspiration fitted for the object in view.

After giving some rules for exploring the respiration, he adds—"All these precautions, however, are only necessary for beginners. In a month or two the ear becomes accustomed to distinguish, amidst the sounds that reach it at the same time, that particular one of which it is in search, and to hear it in some degree exclusively, even when it is weaker than all the others."

I suspect that few can justly boast of such success as this.

"When the respiration is heard distinctly, and with nearly equal strength, in all parts of the chest, we may affirm that there is neither effusion in the pleura, nor *engorgement* of any kind in the pulmonary tissue.

"When, on the contrary, the respiration is inaudible over a certain extent, it may be affirmed that the corresponding part of the lung has, from some cause, become impervious. This sign is as well marked, and as easily perceived (*aussi caracterisé et aussi facile à saisir*) as the existence or absence of sound distinguished by percussion, according to Avenbrugger's method, and it indicates precisely the same thing."

The manner in which percussion is spoken of in this last sentence will no doubt restore the spirits of those who might have been somewhat discouraged by reading the chapter on that subject. If we now turn to the *Section troisième —Des productions accidentelles développées dans le Poumon*, we shall find something scarcely reconcileable with one of the preceding remarks.

"When any tumor is of rather considerable size—that of an egg, for example, the stethoscope indicates its presence by the absence of respiration in that part. But when the tumors are small, *however numerous they may be*, auscultation affords not the slightest indications (*l'auscultation n'indique plus rien*), if the pulmonary tissue between them is otherwise healthy.

"I have often heard respiration effected with equal force and clearness (*avec une force et une netteté égales*), on both sides, in individuals who, when opened, presented one lung in a healthy state, or containing only some tubercles of very small volume, and the other filled with tumors of the same kind, varying in size from a millet seed to a filbert, and so numerous, that this lung was at least doubled in weight."

But to return to "l'auscultation de la respiration,"—respiration caverneuse. Of this I shall content myself with saying that a long course of study will be found requisite for attaining such a degree of skill as shall justify a decided opinion about it in general; nor will even this exempt any one from the necessity of great caution in many instances.

As to the remark, that, in cases of doubt, other phenomena afforded by the voice or cough speedily remove all uncertainty, it would have more value if the voice and cough were not themselves of most difficult interpretation.

De l'égophonie.

Let the student recollect, that, according to Laennec, ægophony cannot be fully relied upon as a sign, unless it consists in a bleating, shrill, and silvery resonance, at the surface of the lung, (l'égophonie n'est vraie et sûr comme signe que quand elle consiste *dans une resonnance chevrotante legère et argentine à la surface du poumon*,) and he will not lightly pronounce as to its presence.

Such an ægophony is, I apprehend, of rare occurrence; and perhaps Laennec has rather limited than too much extended the powers of auscultation in

this instance. There are superficial "frémissemens," scarcely accompanied by the other characters mentioned, which appear to be sufficient proofs of the existence of liquid in the pleura.

De l'Auscultation de la Toux.

To distinguish the resonance of the cough in a large bronchus from its resonance in a cavern, is, in many cases, a most difficult task, and the attempt too often serves to lead into doubt or error.

When a timid patient coughs only from the throat, without producing any resonance in the bronchi, the remedy proposed is to invite him to take a deep inspiration, and then to cough.

On a former occasion we were taught to make a patient cough, in order to produce an inspiration; and now we must make him take a deep inspiration, in order to reach the cough. It happens rather unfortunately that these difficulties generally occur in the same individuals.

De l'Auscultation du Râle en général.

Speaking of a sort of "léger frémissement," which each species of râle imparts to the cylinder, whenever the point where the râle takes place is situated under that to which the cylinder is applied, he says, among other things, that when the râle exists ("a son siège") in a part distant from the point where the cylinder is applied, although it may be heard distinctly, and even strongly, the "frémissement" in question cannot be perceived; and that when it cannot be perceived on any point of the surface of the chest, the "râle" is situated in the most central parts of the lung.

"This sign may, in the reading, appear to be a refinement (subtil à la lecture); but I can affirm that nothing is more easily perceived (que rien n'est plus facile à saisir), and that some minutes' study are scarcely necessary for learning to distinguish, with the help of the stethoscope, the distance of the point where the râle is produced (le degré d'éloignement du point où le râle a lieu)."

To criticize an assertion which no one will probably be so unwise as to defend, might seem an useless task.

De la Dilatation des Bronches.

When the dilatations occupy the ordinary situation of tubercular caverns, auscultation may be a source of error. When, however, they are confined to the lower and middle portions of the lungs, without caverns or dilatations in the upper, auscultation may throw much light upon the nature of the disease.

Signes physiques de la Pleurésie aiguë.

It is scarcely necessary to prove that one of the most valuable signs of the presence of liquid in the pleura is a variation in the sound from percussion, accompanying a change of posture in the patient, and which variation is well explained by the situations occupied by the lung, and the liquid in those different postures. That a satisfactory result cannot always be obtained by this means, either from the patient's debility, his unwillingness to facilitate the inquiry, or from other circumstances, is very true, but notwithstanding these exceptions, this sign is deserving of the utmost attention. Corvisart, in his commentaries on the work of Avenbrugger, has spoken with decided approbation of this means of diagnosis, and has described his own mode of employing it. Laennec, who has quoted Corvisart on several other occasions, contents himself here with saying, that he had seen "quelques médecins" try to obtain a distinguishing sign between pleuritis and peripneumonia, by placing the patient in different positions, and that he had made the experiment himself, without obtaining any satisfactory result. This, I will venture to affirm, was not the fault of the method, which is frequently applicable even in cases where the quantity of fluid is very considerable. Adhesions may destroy its value, or the contrary, according to their extent and situation.

In the article, however, "Des signes et des symptômes du Pneumothorax," the skill of Corvisart in percussion, and his failing to recognise the disease by its means, are not forgotten.

"Here I shall merely remark, that during my attendance on the instructions of Corvisart (pendant que je suivais les leçons de Corvisart), I witnessed the opening of many subjects affected with pneumothorax, in none of whom had the disease been suspected."

"The talent for observation of this celebrated professor, and his skill in

profiting by percussion (à tirer parti de la percussion), will not be denied by any one; and consequently the best proof of the insufficieney of that method for revealing the existenee of pneumothorax, is the circumstance of its not having been reeognized in those cases."

Exploration des organes de la Circulation.

"The application of the hand, the sole means of exploration before Avenbrugger, seldom gives any result, and frequently leads into error as to the real force of the heart's impulse."

I apprehend that the force of the heart's impulse can be as well judged of in general by the hand as by the stethoseope, whilst the former gives a sensation of the volume of the heart as a whole, and of the left ventricle in particular, mueh more accurate, perhaps, than the latter.

That gradual heaving, so eharacteristic in many instances of a large and powerful left ventricle, eau be felt at a given time over a greater space by the hand than by the stethoscope*.

The different "bruissemens," whether in the heart or arteries, have been the source of mueh ingenious speculation. With regard to the disturbance of the currents of blood by diseased valves, disproportioned outlets, projections into the arteries, &c., as a cause of these "bruissemens," one eonsideration rather embarrasses me. On looking up the aorta, there may be seen at a moderate distance from the heart, three openings (to the arteria innominata, left carotid and subclavian arteries), with edges apparently ealeulated to produce whirls and eddies every time the blood is sent from the left ventricle with any degree of force, and yet "bruissemens" are only occasional there, as well as at other divisions of the arteries. This objection may, however, have been already made and refuted, without my being at present aware of it.

EDWIN HARRISON.

Grove.Terrace, Lisson Grove,
March 7, 1837.

* For a practical conviction of the valuable information to be derived from applying the hand to the cardiac region, and also from attending to the mode of respiration in phthisis, I am indebted to Dr. Chambers.

DISCOVERY OF CILIARY MOTIONS IN THE CAVITIES OF THE BRAIN.

By PURKINJE.

I HAVE succeeded at last in discovering the Ciliæ and their motions in the ventricles of the brain in the mammalia. Last summer, while examining the Chordæ Bergmanni, I perceived, on fine sections of the epithelium, a structure resembling the ciliary membranes, and suspected that this epithelium possessed a similar function. I thereupon made numerous investigations with this object in view, but without any result until the 23d of May, when I sueceeded in diseovering the ciliary motions in a state of the most beautiful activity, on the edge of the Tenia Hippocampi, in the tolerably mature fœtus of a sheep thirty hours after slaughter. They now appeared quite distinct over all the windings of the ventrieles, and they could be plainly distinguished, even where they did not appear in motion. I followed the motions, without difficulty, through the third ventricle to the infundibulum, to the olfactory tubercles, and finally through the aqueduet of Silvius into the fourth ventricle. Here the motion eeased, but the ciliæ were still distinetly observable, although somewhat shorter than in the foregoing situations.

The eiliæ are proportionably long, pointed (not ragged, as in the bronehial tubes), and exhibit a whip-like vibration; we perceive also a layer of granules to which they are attaehed, and which are very easily rubbed off without destroying the continuity of the epithelium. The other day I examined the brain of a sheep, in which they could also be perceived with great facility. They have been seen likewise by Dr. Valentin, in the tolerably matured fœtus of a sow; in another fœtus of the same description, at a much earlier period, they could not be distinguished: probably the parts are too delieate for our clumsy instruments. On the whole, I have perceived from these few examinations, that the eiliæ found in the ventrieles of the brain possess a finer degree of sensibility, and are much more easily destroyed, than those of any other organ. I have not been able to discover them in the brain of a sparrow, or of a carp, which I examined; but cannot, on this account, draw any con-

clusions as to their non-existence. I could not detect any traces of them in a deceased human brain which was sent me: probably they are very transient, (as appears to be ascertained from the female ovary, and the mucous membrane of the nose), but as easily reproducible. I could not find any ciliæ in the membrane of the choroid plexus; but I have made long since a very interesting observation on this membrane. The whole plexus is covered by a peculiar matter, like the granular substance of the ganglions, and composed of the most regular granules, each of which contains a small corpuscle in its centre. This membrane appeared to me at the time as belonging to the nervous tissues, although at present I see many reasons to look upon it as epidermal *.

CASE OF HYPERENCEPHALOUS MONSTROSITY;

CONJOINED WITH OTHER MONSTROUS FORMATIONS.

To the Editor of the Medical Gazette.

Sir,

The following abnormal conformations were met with lately in a dead-born fœtus of the 7th month, the product of a first pregnancy in a young married female.

The cranial bones were deficient above plane of occipital protuberance, so that a great part of occipital bone, the whole nearly of both parietals, and almost the whole of frontal bone, were wanting. Beyond the margins of these bones a large nodulated cerebral mass protruded, covered with a smooth, fibrous-like membrane, of a dark red colour, continuous with the scalp. The inside of this firm membrane presented a villous or pulpy appearance, with cord-like bands running along it in different directions. Through the interstices of these bands the brain formed several encephalic swellings, giving it, as above stated, a nodulated appearance. One of these encephaloceles, situated where the posterior fontanelle ought to have been, was nearly the size of a small hen's egg, formed by the protrusion of a considerable part of right posterior cerebral lobe. In its centre a clot of blood of considerable size was found. At the summit of middle lobes of cerebrum there were two other smaller protuberances, of a flattened form. The one on right side was larger of the two, and attached to its base there was a portion of membrane in every respect resembling the fœtal envelopes, forming a sort of open, elongated pouch. This membranous pouch in structure bore no resemblance to the membrane investing brain, nor did it present the characters of common false membrane, but seemed really part of the fœtal membranes, with which we presume the brain had, at this part, during an early period of intra-uterine life, become united.

Two or three additional small encephalic swellings were observed above and behind ears, and one about the size of a nut, at lower part of middle of forehead.

The substance of brain was very soft and congested, containing a few small bloody extravasations, in addition to the one above-mentioned. Its convolutions were not very distinct. It was fully larger than is commonly found in a well-formed fœtus of the same age. It appeared low and narrow anteriorly. The base and central parts were well developed, and the nerves sent off from it well formed and regular.

Cerebellum, as to size, natural, but covered with a thin layer of coagulated blood. Bones forming base of cranium perfect, as also spinal column.

The face, which was of a brownish red colour, presented a very unnatural appearance. The eyes were wide apart, and prominent. In place of the usual conformation of nose, there were two small roundish apertures, corresponding to nostrils, sufficiently large to admit the point of a common quill, through which the spongy bones were visible. These apertures were about half an inch apart, and from each of them a fissure, or groove, between three and four lines in width, passed obliquely upwards and outwards, running close to inner canthi of eyes, and terminating about half an inch above superciliary ridges. These grooves were lined with mucous membrane, continuous with that lining inter-

* Dublin Journal, March 1837.

nal nares. Superiorly they became gradually more superficial, till lost in the adjacent skin. A narrow bridle of skin was stretched obliquely across the upper part of the one on right side.

The right side of upper lip was cleft in same line as corresponding groove in cheek, and the traces of consolidation of a similar division on left side were visible; the line of junction being slightly depressed and irregular.

The ossa nasi and nasal cartilages were defective. The other bones of the face were well developed, and the constituent parts of superior maxillary bones firmly united. There was a fissure in fore-part of hard palate, not extending through the bone. Its edges were thick and slightly everted.

The abdominal parietes, from inferior extremity of sternum to the insertion of umbilical cord, were patent, and eventration of liver, stomach, with the spleen and intestines, existed. The liver was large, and somewhat different in shape from what it usually is. It extended from upper part of right side of chest, obliquely downwards, to the left of umbilical cord, with a deep notch in its inferior extremity, into which umbilical vein entered. It was slightly attached to diaphragm at its posterior surface. The other abdominal viscera presented nothing worthy of particular notice.

The ribs on right side, in place of arching forwards to be articulated with sternum, were bent downwards, forming a very acute angle with the vertebræ, reaching to the spine of ilium. The upper ones were slightly twisted upon themselves. From the unusual direction of ribs the pericardium immediately came into view, on the integuments being raised from front of chest. Heart normal. Two-thirds of right side of sternum defective.

Right superior extremity was wanting. On dissection, we found the clavicle in a rudimentary state, balanced between the sterno-mastoid and subclavius muscles. There was no scapula; but a little below distal extremity of clavicle, lying on lateral aspect of two of the upper ribs, a small cartilaginous body, of irregular form, was found, to which the trapezius, rhomboideus, and serratus magnus, were attached. The latissimus dorsi and pectorales muscles were wanting. The cervical nerves on this side were scarcely perceptible filaments.

The *arteria innominata*, as usual, divided into two branches. The carotid coursed up the neck as usual, but the other branch, corresponding to the subclavian, after giving off the inferior thyroideal, passed upwards and outwards under internal jugular vein, and entered the transverse processes of the vertebræ, at points where the vertebral usually enters. No branches corresponding to the transversalis colli, internal mammary, or supra-scapular arteries, were given off from the above artery, before entering the vertebræ to ascend to the encephalon. At its origin it was nearly as large as the carotid.

We may state that the placenta presented no pathological lesions, and the labour was natural.

Although several irregularities of organic formation are not unfrequently conjoined in the same subject, it is not often, we believe, that such a combination as the above is met with. The monstrosities which the face exhibited are of rare occurrence. Klein and Nicati were the first who particularly noticed them; they have since been described by M. Laroche under the title of congenital fissures of the cheeks. According to M. Isid. St. Hilaire, they arise "du defaut de soudure ou de la soudure très-tardive de deux des cinq pièces principales, qui, d'après MM. Serres et Beclard, composent la machoire superieure chez l'embryon, comme le bec-de-lievre depend du defaut de soudure ou de la soudure tres tardive de l'inter-maxillaire et du maxillaire *." Like hare-lip, these fissures or grooves may be simple or double, and vary in extent. They are seldom observed extending so high as in our case.

Much light has of late been thrown on the laws which regulate the production of monsters. Meckel, St. Hilaire, Serres, and others, have shown that arrested, retarded, and excessive development of the various organs, are sufficient to account for a large proportion of these irregular beings; but as it would be out of place to enlarge on this subject, we may be allowed to state, that the hypertrophy of the brain probably originated from the increased

* Traité de Tératologie, t. i. p. 592.

quantity of blood sent to it through the subclavian artery, which, as has already been stated, took the usual course of the vertebral, and that, by the teratological law of antagonism, or "balancement," the cranium was correspondingly atrophied. St. Hilaire is of opinion that adhesions between the ovum and its envelopes are occasionally the cause of congenital deformations; and those of the head in our case might partly be dependent on this cause. Nicati has described a monster, which, like ours, was affected with fissure of the cheeks and hare-lip, and in which the umbilical cord, after its exit from the abdomen, was rolled round the head, and connected with a prolongation on top of head, which he supposed to be a branch of the umbilical cord, but which was probably merely something analogous to what was met with in our case. On Nicati's case St. Hilaire makes the following remarks:—"On peut supposer avec beaucoup de fondement, comme l'a fait mon pere, que la pretendue branche cranienne du cordon ombilical était un simple cordon tegumentaire établi entre le placenta et la region de la tête qui presentait le vice de conformation; en d'autres termes, une de ces brides d'adherence que l' ou voit si souvent etendues entre les parties frappées d'anomalies et le placenta ou les membranes de l'œuf, et qui, par le tirage qu'elles ont pu exercer sur ces parties, auraient mis obstacle à leur developpement regulier *."

The absence of the upper extremity is satisfactorily accounted for by the deviation of the subclavian artery, and so far supports M. Serres' opinion, that all organic deviations result from irregularity or deficiency of the vascular system,—an opinion supported by many strong arguments, but not altogether free from objections.

The fœtus above described is now in the possession of my friend Mr. J. Douglas.—I remain, sir,

Your obedient servant,

WALTER DICK.

Glasgow, Feb. 27, 1837.

* *Loc. cit.* p. 593.

MEDICAL GAZETTE.

Saturday, March 11, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

PARLIAMENTARY INQUIRY INTO THE WORKING OF THE POOR-LAW.

SEVERAL letters have been sent us, during the last week, on the subject of the medical arrangements under the present Poor-Law: we publish a selection from them which we think will be found interesting, and to which, we have no doubt, a high degree of importance would be attached were we at liberty to disclose the writers' names.

The "Retired Practitioner" may be excused on the score of his position for not being aware of our having anticipated him on some of his topics: it is satisfactory, however, to find him recommending the very same kind of expedients that we have proposed—particularly with reference to the propriety of the corporate bodies interfering in behalf of their licentiates and alumni. The members of the corporations have the same opportunity of knowing, in their corporate as in their individual capacity, the grievances by which the great mass of the profession in the provinces are oppressed—while their means of being useful are certainly not the more circumscribed by belonging to those institutions which originate the different orders of practitioners. "Chirurgus," indeed, who is manifestly in the councils of "his order," informs us that the College of Surgeons has interfered, but ineffectually. Does it follow, however, from this, that they set the right way to work? Were the steps of their procedure prudent and well advised? Have they yet presented any

petition to parliament, praying for a redress of those abuses and grievances to which their licentiates are so notoriously exposed? Society rings with the complaints made of the mode in which the Poor-Law functionaries have mismanaged the medical part of the system: their "tendering" and intimidations, their threats, insults, and degrading treatment of medical practitioners, are every where talked of. Now it appears to us that the corporate bodies, if they have any doubt as to the facts, ought to inquire into them, — the occasion justifies almost any departure from old rules: and should they in the course of their researches obtain, as we have no doubt they would, the amplest confirmation of the hardships and indignities suffered by men undeserving of such treatment — men who hold *their* diploma, and who are in great measure reduced to such extremities by being thus connected with an overstocked profession—we repeat, that those bodies are bound to intercede, with all discretion certainly, but without bating a jot of firmness or determination to have justice.

Important, however, as it is, that the medical corporations should take a leading part in asserting the rights of the profession, it must mainly depend on the general body of practitioners throughout the kingdom to crown the object with success. As our correspondent, who subscribes himself "Personally unaffected," recommends, petitions should be got up in every town and village where there are medical men: the appeal for justice should be made to both Lords and Commons: no apathy should be displayed in an hour so critical. Facts and evidence should be forthcoming; the views of individual practitioners, who have bestowed time and attention on the consideration of the subject, should be submitted to parliamentary cognizance; and above all, where plans for adjusting the complicated difficulties of the question have been devised, they should be laid before the legislature without the loss of a moment. It is well known that what is everybody's business is nobody's business, and that unless some two or three persons consult together, to perform that which it is the interest of the community to see accomplished, the work will always remain undone.

Luckily this disposition to shift off one's own shoulders the business of meditating and acting for the common good does not universally prevail amongst us. We were last week enabled to point out some exemplary instances of the contrary.

In our last number we published the observations of the Messrs. Rumsey and Mr. Ceeley, regarding an improved plan of medical relief for sick paupers. These gentlemen, with most commendable zeal, have deeply reflected on the difficulties embarrassing the present system, and have arrived at some expedients which seem well adapted to remove impediments. Their demonstration of the necessity of a Medical Board, on the plan of those directing the medical concerns of the army and navy, is conclusive; and their strictures towards the abolition of the "tender" and lowest possible remuneration system, have much force. But our readers, we trust, have perused the document for themselves; our reason for at present noticing it is to draw attention to an Appendix since published by the same authors. During the week, the Observations, together with the Appendix to which we allude, have been presented to the public in a pamphlet shape; we may therefore complete our edition by at least some account of the additions, regretting that our space will not allow us to give them more at length.

The first paper in the Appendix is from the pen of Mr. Robert Ceeley, of Aylesbury, in which the author proposes, as a sort of fundamental principle, that medicines and medical attendance for paupers should not be supplied from the same source.

"Medicines, leeches, and other appliances, should be purchased at the joint expense of all the parishes of a Union, be deposited in an appropriate place, in a Dispensary, in a convenient part thereof, and be put under the care of a proper person (a Dispenser), who should dispense the same according to the directions only of the several medical officers of the Union.

"Each distant parish should have a sufficient supply of medicines, preparations, &c. for ordinary use, deposited in an appropriate place, for the wants of the paupers of that parish, and under the care and direction of the parish medical officer.

"In all urgent cases, sick paupers would thus be spared the trouble, time, and delay of sending to a distance for medicine; other cases not so urgent might, if necessary, be dispensed for at convenience, at the central Dispensary. Thus the delay in the administration of important remedies would be prevented, and all temptation to withhold suitable medicines, or the *suspicion thereof*, would be completely removed."

With regard to the fitting remuneration for medical attendance—a most difficult and complicated problem—Mr. Ceeley lays down a scale which seems moderate and fair.

Number of Population.	At per Head.	Total.
	s. *d.*	£ *s.* *d.*
150	1 0	7 10 0
300	0 11	13 15 0
500	0 10	20 16 8
1,000	0 9	37 10 0
2,000	0 8	66 13 4
3,500	0 7	102 1 8
5,000	0 6	125 0 0

"Distant parishes to pay in addition the customary charge for journeys; one journey only being charged to any village on the same day, with the exception as before mentioned. Thus, while no adequate inducement to needless attendance is offered, the important item of *distance* is fairly and easily provided for."

In workhouses, he proposes that the payment should be per head per annum, graduated according to numbers: journeys also being chargeable where the medical officer resides at a distance, and is suddenly called on. Midwifery cases, dislocations, fractures, and capital operations, to be liberally paid for extra.

Mr. H. W. Rumsey, in the second document of the Appendix, states his views on the same subjects—provision of medicine, and remuneration for medical attendance. Like his colleague, he thinks that medicine and attendance should proceed from different sources, but very properly suggests the difficulty of establishing depôts of medicine in other places than tolerably large towns and Union workhouses.

"In rural districts, where none of these methods could be adopted,—for instance, in places *where no one competent to dispense medicines could be procured*, or where the expense of a separate establishment would be out of proportion to the benefit, or where only one medical officer might reside, — the alteration would appear hardly practicable, and the medical officer might himself continue to provide the medicines."

The scale for remuneration proposed by Mr. H. W. Rumsey does not seem to differ much from that of Mr. Ceeley. He calculates by the number of cases per annum; and his graduation is as follows:—

Number of Cases.	At per Case.	Sum Total.
	s. *d.*	£. *s.* *d.*
25	6 0	7 10 0
50	5 6	13 15 0
100	5 0	25 0 0
200	4 6	45 0 0
400	4 0	80 0 0
800	3 6	140 0 0
1,600	3 0	240 0 0

A second method is also proposed, by a payment, per head, on the average number of *regular* paupers, or those who are in the receipt of relief in money or in kind. Mr. W. H. Rumsey says again,

"The scale for payments according to the number of paupers should be compiled on the same principles as the foregoing scale for a payment per case; but in estimating the respective amounts, it should be remembered that, owing to the change in the administration of relief, the term "pauper" is becoming more and more exclusively confined to the *aged*, the *infirm*, and the *diseased;* —thus of course the rate of remuneration must be *increased* proportionally."

Journeys, midwifery, and capital operations, to be paid for much in the same manner as proposed by Mr. Ceeley.

The two other papers in the Appendix chiefly relate to the formation of the governing Boards. A Board is recommended consisting of three medical men, two of them appointed by the government, and the third by the medical faculty. But whether the latter appointment should be vested in the heads of the profession or in the whole faculty, the writer does not venture to decide. We think he needlessly raises a question on this point which might lead to much unpleasantness and trouble.

EVENING MEETINGS AT THE COLLEGE OF PHYSICIANS.

The first evening meeting of the season took place on Saturday the 4th. It was very numerously attended, and we observed among the company Lord Melbourne, Lord Goderich, Lord Stanley, several dignitaries of the church, and many other distinguished persons. But it was remarkable—and we heard it made the subject of remark—that very few either of the Fellows or Licentiates of the College were present on this occasion.

The arrangements were in several respects exceedingly bad. The President's chair was placed at one end of the room, of which a portion was separated from the rest by a row of chairs almost as completely as if it had been railed off. Behind this barrier the company (with the exception of the fortunate few) collected in a dense mass; and as they could not hear, they had recourse to talking, so that there was a constant and rather loud buz of conversation, by which the voice of the orator was sometimes nearly drowned. It answers much better, and has much less of an exclusive appearance, to place the President's chair in the centre of the room; and it would be a great accommodation, as well as one very easily procured, to have a number of benches (such as are let out for routes) arranged round the sides of the apartment. Neither can we compliment the party who manages the purveyor's department on his success. There were not nearly enough of attendants, and various parts of the equipage (particularly the very necessary one, of teaspoons) were lamentably deficient. We mention these apparently trifling circumstances, because, taken collectively, they tended to produce an unfavourable impression.

The learned President, on whom the task of supporting these meetings seems almost exclusively to rest, read a paper "On the Effects of Cold on the Human Frame." It was remarkable for the same display of literary lore by which Sir Henry's former Essays have been characterized. We subjoin the paper nearly as it was read, with the exception of some of the more lengthened classical quotations.

On the Effects of Cold. By Sir Henry Halford, Bart. &c. &c.

The learned President began by alluding to Dr. Hawkesworth's account of Captain Cook's voyage round the world, in which we find it stated that Sir Joseph Banks and Dr. Solander landed on Terra del Fuego, and determined to make an expedition into the country in pursuit of some objects of natural history. They were accompanied by a draftsman, and nine other attendants; but previously to commencing their walk, Dr. Solander, a native of Sweden, and well acquainted with the effect of extreme cold in the mountainous country between Norway and Sweden, thought it proper to warn the party against yielding to a propensity to sleep, which the extreme cold and fatigue would inevitably occasion in them, as, if they indulged it, they would wake no more.

This inclination to sleep the Doctor himself was the first to feel, and finding it irresistible, implored the party to go on, and to allow him to follow in half an hour. This could not be permitted after such a warning as he had pronounced, and they dragged him along, and carried him for some time. Nevertheless he slept for five minutes, and it was discovered that the muscles of his feet were become so contracted, that his shoes dropped from them, and he could wear them no more.

The party lost their way in a snow storm, and were detained on shore two days and nights, with a very meagre inadequate stock of provisions, and the unhappy result of the expedition was, that a black servant, and two others of the party, were left behind dead in the snow.

You may remember, perhaps, continued Sir Henry, that Xenophon, in his modest and beautiful narrative of the return of the 10,000 Greeks after their invasion of Persia under the younger Cyrus, whose death in the battle of Cunaxa (near the site of the modern Bagdat), rendered their retreat necessary, encountered some unusually severe weather in Armenia, which proved fatal to a part of the army. It had marched three successive days in the snow, and on the last a strong north wind having arisen, which blew in the faces of the men, thirty soldiers died in one night, seared, as if burnt, and stiffened by cold.

The word *αποκάιων*, which is used by the Greek author, is notable, and Virgil expresses the same idea in terms so alike as to be almost a literal translation of Xenophon's account—

"Boreæ penetrabile frigus adurat."

We have also the same effect of cold described by Livy, in speaking of its influence on the animals passing over the Alps—

"Torrida membra gelu ;"

And Milton has it—

"And frost performs the effect of fire."

But there are some other military expeditions in modern times, by which we may exemplify the effect of cold on the human frame, operating more disastrously, and more extensively, than on the army of Grecians commanded by Xenophon. When Charles the XIIth, of Sweden, was killed at the siege of Frederickshall, in Norway, General Ahrenfield, who lay before Drontheim, resolved immediately to withdraw his army to Sweden. It had been reduced by casualties and by desertion to 7300 men, and his enemies, the Danes and Norwegians, were in possession of all the principal roads which led to Sweden. He was compelled, therefore, to make his retreat over a desert, eight leagues in length, lying between Maragher Fidelen and Handeslock. Accordingly on the 11th of January he began to march with his forces. When they had hardly made two leagues of their way, they were overtaken by a storm of snow, which lasted three days and three nights, without intermission. On the 13th January, a lieutenant and fifty men were observed lying dead in a heap with cold. On the 14th, whole squadrons of the Swedes were sunk in the snow; some were trodden under foot by their horses; others had pitched upon their heads, being oppressed by their arms and accoutrements; others lay in whole troops upon each other, still holding their horses, which perished likewise, nothing appearing of some of them but here and there a head raised above the snow. General Ahrenfield himself retired over the mountain of Fidal with 5250 men, of whom only 2000 lived to reach Handel, a fortified town, and that in so miserable a condition that 564 more died soon after, and the remaining 1436 were obliged to march over mountains almost inaccessible; so that only 870 Finlanders arrived at Donnaschantz, in Sweden. In short, the number of those who perished in this march amounted to 5200, out of an army which mustered 7300 when they broke up from Drontheim*.

But the disastrous effect of cold on a retreating army was never more remarkably exemplified than in the return of Bonaparte from Moscow. You remember the insolent triumph with which, after having captured several of the capitals of the continent of Europe, he marched to invade the Russian empire, at the head of an army of nearly half a million of soldiers. He did, indeed, possess himself of the ancient capital of that empire also—*sed qualis rediit ?* The determination of the Russians to resist the aggressor to the utmost, and

* From the Historical Register for the year 1719; vol. iv. p. 203—210.

at the expense of any sacrifice, even the voluntary burning of their ancient beloved city, compelled him to remeasure his steps over a country which he himself had laid waste, at a period of the year when frost and snow co-operating with the strenuous efforts of his enemies, so harassed and discomfited him, that out of that immense army not more than 10,000 Frenchmen, and 25,000 auxiliaries, lived to return to their native country; and notwithstanding repeated desperate efforts, made in vain for a while afterwards—

"He left the name, at which the world grew pale,
To point a moral, or adorn a tale."

No doubt if the great moralist had lived in these days, he would have found a better parallel for Xerxes in Bonaparte's fate, than in that of any other disappointed ambitious monarch who had been arrested in his course, and compelled to desist from his pursuit of what the world has not yet ceased to call glory.

The Emperor of the French left Moscow on the 19th October, when he had ascertained the extent to which the fire had destroyed the resources on which he had depended for the subsistence of his army during the winter; and by the time he had reached Smolensko the frost was become intense; and although he had left Moscow with 120,000 men, and the fragments of various divisions besides had assembled here, it was with great difficulty that 40,000 men could now be brought together in fighting order. The troops often performed their march by night, by the light of torches, in the hopes of escaping their merciless pursuers. When they halted, they fell asleep by hundreds, to awake no more. Their enemies found them frozen to death, around the ashes of their watch-fires. The horses having been ill fed for some time, were equally unable to resist the united effects of cold and fatigue: they sank and stiffened by hundreds and by thousands. The starving soldiers slew others of these animals, that they might wrap themselves in their warm skins, or mitigate the severity of the blast by taking refuge within their disembowelled carcases.—But enough of these horrors.

The immediate cause of death by cold is apoplexy. The heart is arrested and paralysed in the exercise of its office, and no longer supplies the brain with arterial blood. Nor is the blood thrown with sufficient force to the extremities. It accumulates, therefore, in the large vessels proceeding immediately from the main spring, and there is no ingress for the blood returning from the brain. The large sinuses, therefore, become over-gorged, and apoplexy follows.

Portal spoke decidedly, many years ago, of apoplexy, as the fatal effect of cold. Dr. Cooke doubted this, because, he said, it had not been demonstrated. Since he wrote, Dr. Kelly has demonstrated it by the post-mortem examination of the bodies of three persons who were found dead upon the sands of Leith, after a night of extraordinary cold.

The philosophy of death by breathing foul or mephitic air, is different. Here the lungs are intercepted in their functions. No oxygen is admitted to the blood, whilst the heart, retaining its activity, sends the blood to the brain charged with carbon; the smallest portion of which is a fatal poison to it. This is the case when death takes place by drowning. The lungs are precluded from receiving oxygen air, and cannot throw off the carbon. Under such circumstances, it has been thought probable that life is extinguished in less than three minutes; unless, happily, the sufferer should have fainted. Then, the heart's action being stopped, the carbon is not thrown upon the brain, and, in such instances, animation has been restored to the apparently dead body, even half an hour after its immersion in water.

The transition from life to death is easy in all these cases. Death by cold is longest in accomplishing his work; but the period of suffering is much abridged where despondency, privation, and fatigue (all of which are likely to be the fate of a retreating army), combine with cold. The unhappy benumbed being feels quite easy; he complains that he cannot move, in answer to solicitations to exert himself, and only desires to be left quiet. Insensibility steals softly over all his system, as the pressure upon the brain increases, and death at length sets his imprisoned spirit free.

When the cold has not been severe enough to destroy life entirely it mutilates the extremities, and mortification ensues from a want of circulation. The Lascars who arrive in this country from

India in the winter season are very prone to this effect of a climate so much colder than their native one, as the records of the hospitals in the city abundantly prove.

Analogous to this is the mortification which sometimes occurs to elderly persons, from ossification of the arteries of the extremities. The blood-vessels having become impervious, the vital principle no longer pervades the feet and the toes, and they perish in consequence.

In confirmation of this opinion of the effect of cold, in a severe degree, upon the human frame, under depression of spirits, and privation, and fatigue, Sir Henry related a hitherto unpublished narrative of the misfortunes encountered by four English gentlemen, in a pedestrian expedition from Contamine to Col-de-Bonhomme, in Switzerland. The walk is one of about three hours, in common circumstances: one of the party was a clergyman, who had lately lost his wife, and had been recommended to travel in order to dissipate his sorrows. He set out, with his companions and a guide, on the 12th September, 1830, at six o'clock in the morning, after a light breakfast. It had snowed in the night, and was raining a little when they started; but in a short time it began to snow again, and continued to snow during the whole of their passage. The path was soon obliterated, and they lost their way. After walking seven hours, the clergyman complained of his inability to proceed further. He said he could not move his legs. The danger of stopping, however, was pointed out; he was encouraged to go on, and was supported, assisted, and carried; but at length he entreated that he might be left, adding that he was quite easy, ready to fall asleep, and must stay where he was. They then wrapped him up in his cloak, and left him, and proceeded as well as they were able; but at the end of eight hours, when they had at last regained the path, and had arrived within a quarter of an hour's walk of the place of their destination, another of the gentlemen failed in his strength, and could go on no longer. The other two, and the guide, attempted to carry him, but they fell headlong continually into the snow; and further exertions to assist him appearing vain, and only to endanger their own safety, he too was left, wrapped up as well as they could wrap him, and seated upon two knapsacks, and they redoubled their efforts to reach the Col-de-Bonhomme, in order to send assistance to him. They soon reached it, and instantly dispatched seven men to bring him in. He was brought in in the course of an hour, alive, it is true, but he died the next day. A third lost three of his fingers soon after, at Geneva; and the fourth escaped unhurt. We need not add that the poor clergyman was found a corpse.

Yet a cold climate, with the appliances of art, is not insalubrious, nor even incompatible with long life. The proportion of deaths annually in Switzerland is 1 in 59. The proportion in this country is 1 in 60; though in the metropolis, and in Birmingham, it is 1 in 40, if we may believe the latest statistical account. In France, throughout the whole of it, it is said to be 1 in 40; in Italy, 1 in 33; in Rome, 1 in 28, owing, perhaps, to a malaria there.

But what shall we say of Russia? Sir Henry was informed by the late Russian ambassador, that there was a level country, of about one hundred leagues square, sloping to the south, on the borders of Siberia, where a year rarely passed in the course of which some person did not die at the age of 130. On inquiring whether they could depend upon their registers, the reply was, "anybody who knows the practices of the Greek church will tell you that the bishops are more careful of their registration there, if possible, than your parochial clergy are in Great Britain." Is it, then, that these people are longer in coming to their maturity than the inhabitants of southern latitudes, and proportionally slower in their decline and decay, as the oaks of the forest are compared with other trees? Or are they the Hyperborei of the ancients? of whom Pomponius Mela says; "Diutius quam ulli mortalium et beatius vivunt,"—and of whose happiness we read in the Choephori of Æschylus, as if it were proverbial—

> Τᾶντα μεν ὠ πᾶι κρεισονα χρυσοῦ
> Μεγαλῆς δε τόχῆς, καὶ υπερβορεου
> μειζονα φωνεῖς.

We must presume that these people have the power of counteracting the effects of great cold by artificial resources, as experience and modern ingenuity contrive to provide for the safety of our mariners, who have been exposed frequently of late years, almost with

impunity, to the rigors of a winter, even at the pole.

Such precautions were not known at the time that Sir Hugh Willoughby sailed on a voyage of discovery in those regions, in the reign of King Edward VI. in 1555; and he perished by cold, with all his crew, in Lapland. But now every practicable appliance, on shipboard, is made available as a shelter and protection against great cold,—whilst the soldier on a march, not caring to embarrass himself with cumbrous defensive clothing against only a contingent evil, has no resource against frost and snow, if they should occur, by which he can resist their effects; and he is sometimes arrested and surprised thereby into his destruction. Yet it is found that the life of a soldier is more favourable to longevity than that of the sailor. By the returns of the establishments of Greenwich and Chelsea Hospitals, it appears that the former (Greenwich) contains 2710 pensioners,—the latter (Chelsea) only 509. Now it has been stated to me (said Sir Henry) that of the 2710, several reach the age of 80, and even 90 years, but very rarely indeed, 100. Whereas at Chelsea, containing only 509, scarcely a year passes in which some one does not die at 100.

This remark on the comparative value of life in the two services is not new,—it is as old as Homer. In the Odyssey, when Ulysses, having fallen in with the celebration of some games in one of the islands which he traversed in his way home, after the surrender of Troy, was requested to perform some of those feats of activity and of personal prowess for which he had made himself so famous during the siege;—it was remarked, "No; you forget that he has been a good deal at sea since that time, than which nothing contributes so much to melt and break down a man." Homer's words are—

> Ου γαρ εγωγε τι φημι κακῶτερον αλλο θαλασσῆς
> Ανδρα γε συγχεναι, ει καὶ μαλα καρτερος ειη *.

> For I declare there is nothing like the sea
> To break a man, however strong he be.

Sir Henry put it to the judgment of his hearers to decide whether a better reason than the accidents of the two services for the greater facility of reaching old age on the part of the soldier than the sailor, may not be found in this consideration—that the soldier does not commence his military life before his frame has completely developed itself; whereas the sailor enters upon his duties whilst yet a youth, his manhood remaining to be perfected on harder and less wholesome fare.

In conclusion, the learned President urged that they who would really relieve the poor, should not limit themselves to supplying them with food, but also take care to guard their frames from the baneful, but often neglected, influence of cold.

* Odyssey, 8th Book.

CHARTERED MEDICAL BODIES;

PETITIONS TO THE LEGISLATURE.

To the Editor of the Medical Gazette.

Sir,

As there is now a Parliamentary Committee of the House of Commons, sitting on the subject of the Poor-laws, I would beg to suggest whether it would not be desirable for petitions to be presented from medical men in all quarters, and such other persons, not of the profession, as may choose to join them, praying that the arrangements connected with the medical relief for the poor should be put on a more efficient and satisfactory footing than at present.

It would be important, in my opinion, to direct the prayer to two simple points—one, the doing away entirely with the unworthy and degrading method of tender; the other, the having a fair and moderate remuneration for services, independently of the value of the medicines, so as that there should be no temptation held out, as at present, to do without or be sparing in the use of efficient medicines.

A report of the Provincial Medical Association, and a letter lately addressed, by Dr. Yelloly, to Lord John Russell, have called the particular attention of the public to the subject; and I would submit, whether it would not be worthy of the chartered medical corporations of the country—the Royal College of Physicians, the Royal College of Surgeons, the Apothecaries' Company (or rather the Court of Examiners), and the Royal Medical Chirurgical Society, and also of the other medical societies of the metropolis—to petition the legislature on a measure so much connected with the credit of the profession of physic, in all its branches.

If you, sir, with your accustomed public spirit, would join in the recommendation of this proceedure, or any other that you may approve more, I have every expectation that the advantage would be considerable. But again, I would submit that the medical view of the subject, as connected with the credit of the profession and the advantage of the poor, should be kept entirely clear from every other. It is of sufficient magnitude and importance to have an independent position of its own.

I have the honour to be, sir,
Your obedient servant,
A Retired Physician.

March 7, 1837.

THE MEDICAL CORPORATIONS AND THE PROFESSION.

PLAN OF PAUPER RELIEF.

To the Editor of the Medical Gazette.

Sir,

I cannot see how the Colleges or Hall can act or interfere about the poor laws, unless in cases *referred to them* for their opinion. They have no voice in the legislature, and were not consulted by the framers of the measure on the best mode of affording medical aid to the poor; nor can they know any thing about it, except from hearsay, or from references made to them by the government or commissioners, or from particular cases referred to them by individuals; and, as far as the College of Surgeons is concerned, they have always acted on every such case.

How can the College of Surgeons initiate any proposition? The Commissioners contend that a person legally qualified to exercise the medical profession need not be a member of the College; and the legislature has always declined to make it imperative on those who choose to call themselves surgeons to undergo any examination, and to prove their fitness. How can the College, therefore, interfere, where members or licentiates of the Apothecaries' Company are employed by the Commissioners, those licentiates not being members of the College of Surgeons? And if the College was to interfere, many of those who now blame them for apathy would be the first to accuse them of officiousness, in interfering with the interests of their members, who would be proclaimed as being fully competent to take care of their own interests and concerns.

The College *has* made representation to the Secretary of State, and has received answers (of which correspondence any member of parliament may move for copies), and the value of their interference under the existing powers of the Commissioners may then be estimated. It is to be recollected, also, that the general practitioners must all of them be licentiates of the Hall, and are not of necessity members of the College; but even when they are members, they are still belonging to *two* learned bodies; and how is the College to act, or to propose regulations for licentiates of the Hall, unless on complaints or representations of circumstances connected with their position as members of the College?

I have read the proposed regulations by Messrs. Rumsey and Ceelcy; I have long thought that it would be a good thing to have medical inspectors under the Poor-law Act, like the inspectors of army hospitals, to make periodical visits—say six inspectors for the whole kingdom—who would collect the returns or reports of the various medical officers, and embody them in specific reports to the Commissioners. A Medical Board may perhaps be better—or, better still, if one of the Poor-law Commissioners were a medical man. The general education and habits of a medical man would render him as competent as any other man could be to the general duties of a Commissioner, while his particular professional education would supply a sad want in the establishment. I think there ought to be a medical man attached to every union workhouse or prison, as there is to every other jail in the kingdom; that this person should be of superior attainments; that he should be provided with a house close to the workhouse, with medicines, instruments, and appliances of every sort; that he should have an infirmary attached to, or within the walls of, the workhouse, where out-door paupers might also be received; and that he might also attend the paupers at their own houses, within a certain distance, having a house also allowed him for those duties; and that he should be restricted from all private practice. This would insure good medical aid as far as it extended, and it would prevent any jealousies from the resident practitioners. He would be the best aid to the Guardians in pointing out the proper mode of having medical aid supplied to the more distant parts of the union; and reports, or returns, might be made to him from all the other medical men employed therein. This might save the expense of a Medical Board, or of inspectors, but a medical Commissioner would still be a desideratum,—or two.

"Si quid novisti rectius istis
Candidus imperti—si non, his utere mecum."

Your obedient servant,
Chirurgus.

March 5, 1837.

NECESSITY OF ENDEAVOURING TO AVERT THE EVILS OF THE MEDICAL WORKING OF THE POOR-LAW.

To the Editor of the Medical Gazette.

Sir,

It seems to me, that while the great mass of the profession are crying out continually against the working of the medical department of the Poor-law system, they are doing next to nothing to get rid of it! so degrading, and at the same time so inhuman, as its effects will prove if allowed to continue in operation. Why not, as you propose, let every town in England get up a petition to Parliament, signed by all the medical men, with the solitary exception of the hired slave?—and not only would the medical men come forward, but there are many, and I may truly say most of the enlightened inhabitants, who will, for the sake of humanity, affix their names. There is scarcely a Medical Gazette published but there is shewn, in its own true colours, the danger of the system, not only to the well-being of our profession, but also to the lives of our fellow-creatures. Degraded enough we are, and have been for many years, without the necessity of having the Poor-law Bill introduced among us, as an artifice to entrap the poor in pocket, but far more slavish in mind. Should the corporate bodies do nothing to avert the deadly stroke that now threatens us with destruction, I think there will be little doubt that they will soon see the day of their downfal; for although some portion of the profession may be silent, and want individual energy in such a cause, yet they are silent spectators of the scene, and have doubtless weighed the question and formed their opinion; and these very persons who now lie dormant, as it were, will, when they see the real state of things, at some future time be roused to action. I hope and trust we shall rise from this state of degradation improved, by having seen for ourselves what our enemies would do to us, had they the power; but it is impossible that this can be the case if we are *silent* spectators only: we must be up and doing if we wish to save our already falling but noble profession.

Should you think this worthy a place in your valuable journal, by giving it insertion you will oblige me, although

Personally Unaffected.

March 6, 1837.

ST. GEORGE'S HOSPITAL.

Amputation of the Leg.

The operations on Thursday, February 16th, were an amputation of the leg by Sir Benjamin Brodie, and an amputation of the leg and lithotomy by Mr. Hawkins. Both the amputations were the usual circular ones below the knee, except that both operators removed the angle of the tibia, according to their usual practice, to avoid the ulceration of the skin that otherwise not unfrequently occurs. Sir Benjamin's case was one of fungus hæmatodes of the foot,—a bleeding and excessively painful fungus following a puncture made in what appeared some time previously to be an abscess. On dissection, the tumor had all the characters of malignant disease, and seemed to be intimately connected with the os calcis, but attached also to some of the other bones of the ankle. The patient suffered a good deal after the operation from fever and delirium traumaticum, but is now doing well.

Mr. Hawkins's amputation was performed for disease of the ankle, which had commenced in the os calcis. In the autumn Mr. Hawkins had performed the usual operation for necrosis, cutting down upon the inner surface of the bone, and removing about a third of it, which had died, and was surrounded by living bone, except on one side. He had left the hospital much benefited by this treatment, but lately returned with abscesses and disease of the joints. On dissection of the limb, the joint between the os calcis and the astragalus was found extensively ulcerated, and both bones much diseased, and the joints of the astragalus in the ankle, with the cuboid and navicular bones, were beginning to show some inflammation and thinning of the cartilaginous surfaces.

Case of Lithotomy—no Stone found.

The case of lithotomy was a little child of two years old, who was admitted with the usual symptoms of stone, irritation of the penis, pain, and stoppage of urine, which was sometimes mixed with blood, and occasionally with pus, and which was sometimes loaded with the lithates, and was at other times alkaline. The child was sounded by Mr. Hawkins, with his colleagues, Mr. Keate, Mr. Babington, and Mr. Cutler, all of whom believed they felt a small stone; and previous to the first incision, Mr. Keate and Mr. Hawkins again thought they felt it with the staff. The incision into the bladder was then made by Mr. Hawkins, the only instru-

ment used being a common scalpel and staff. No stone was, however, felt by the finger, nor could it be distinguished by a sound which was introduced through the urethra, unless Mr. Keate was right in thinking that he still felt it. Some water was then injected into the bladder, and the child sent to bed, and the child was walking about the ward before a week had elapsed from the operation, at which time all the water passed by the urethra. It remains, therefore, doubtful whether there was really a stone, which was small enough to come away with the first gush of urine, and escaped observation, or whether a stone still remains in the bladder, or whether all these gentlemen had been deceived in the sounding, and the symptoms arose from disordered secretion only. Mr. Hawkins at the time remarked to the pupils that the stone could hardly be encysted at that early age, and therefore he thought if there was a stone it might be among the folds of the bladder, and might come away after the operation, as had been the case in some other instances on record This, however, has not happened. The child, since it has been walking, has sometimes had some suspicious symptoms, which have now lessened, and it has been sounded without any impression having been felt similar to that experienced before the operation *.

Removal of a Cicatrix.

On Thursday, the 23d, the operations were, the removal of a cicatrix by Mr. Walker, and one for ectropeon by Mr. Hawkins. The cicatrix was that of a burn of the chin, which drew down the lower lip in an everted state, preventing the mouth from closing, and occasioning a good deal of inconvenience. A cicatrix from one angle of the mouth had been removed in this girl some weeks previously, and the other angle was operated on in the same way; a triangular portion, including the cicatrix, being removed by a bistoury, as in the operation for cancer of the lower lip, and the edges brought together by hare-lip pins and sutures. The former operation succeeded well, but the girl is at present suffering from an attack of erysipelas, so that the ultimate result of this second operation is still somewhat doubtful.

Operation for Ectropeon.

The operation for ectropeon was that of Mr. Crampton, as modified by Guthrie. The poor girl who was the subject of it had been tortured by the chronic inflammation of the disease for the whole of her life, and had been several times submitted to operation before her admission, having had portions of the eyelids cut out, and having also had the tarsal cartilages removed (though incompletely), as recommended by Jaeger and Saunders; but when admitted under Mr. Hawkins's care, she was still unable to lift her head up or open her eyes, and was nearly blind in both eyes from opacity of the cornea. The right eye had been operated on by Mr. Hawkins a few weeks ago, and the patient had been so far benefited by the operation, as to be nearly free from the sufferings of twenty years' duration. The same operation was now done on the left eye, though with less chance of success, from the small quantity of eye-lid which remained, and which was partly adherent to the globe; and from the degree to which the cornea was vascular and opaque. Two perpendicular incisions were made in the upper lid, about half an inch in depth, one close to the punctum, the other near the outer canthus; and a portion of the skin of the eye-lid, and of the fibres of of the orbicularis muscle, was cut off with a pair of curved scissors. The edges of the skin, where thus divided, were brought together with three ligatures, and the ends of the silk fastened to the forehead with adhesive plaster, with so much force as to hold the eye-lid nearly everted. The girl has now only a very slight pain, which is entirely removed by pinching up a little fold of the skin close to the outer angle (and which will be cut off); and the cornea is already less inflamed, and vision more perfect.

On Thursday, March 2d, the operations were—lithotomy, by Mr. Hawkins; amputation of the thigh, and an operation for necrosis of the tibia, by Sir Benjamin Brodie; after which Mr. Keate removed three encysted tumors from the scalp, and Mr. Hawkins performed a slight operation on the foot.

Lithotomy.

The operation of lithotomy was performed on a lad of 19, by passing a double-edged knife with a beak along the staff, after the urethra was opened, and then a blunt gorget was introduced to enlarge the opening made by the knife in the prostate gland; and the staff being withdrawn, the forceps were passed along the gorget. The stone was a large one (which was the reason for the division of the prostate on both sides), and composed of a good deal of triple phosphate, very soft and brittle, with apparently a lithic acid calculus in the centre. The urine was very albumi-

* We have been thus diffuse with regard to this case, because it has formed the subject of one of those tissues of exaggeration and misrepresentation for which our contemporary is so renowned.

nous and alkaline, and the bladder very irritable before the operation, making the case an unfavourable one for any operation, and rendering it (together with the large size of the stone) unfit, as it was thought, for lithotrity. There was a good deal of hæmorrhage after the operation, and considerable inflammation of cellular membrane in the wound, making it necessary to keep a catheter in the bladder. On the fifth day the patient had a rigor, with some hæmorrhage from the wound, but appears now to be free from dangerous symptoms, though the kidneys continue to secrete urine in the same diseased state.

Amputation of Thigh.

The amputation of the thigh was performed for extensive abscesses connected with disease both of the ankle and knee joints. A large abscess was divided by the operator, who dressed the stump by filling it with charpie, so as to avoid all union. The boy has since gone on well.

Operation for Necrosis.

The operation for necrosis was performed very near the tubercle of the tibia, though not interfering with the knee-joint. A sinus leading into the cancellated structure of the bone having been exposed, the orifice was enlarged by a trephine, and some small pieces of dead bone removed from the cavity, which was dressed to the bottom with lint. The boy has unfortunately been seized with erysipelas of the leg, of rather a severe character, which disease has been prevalent during the late cold north winds; but he appears to be now getting better.

Removal of Encysted Tumors.

The encysted tumors were of the usual character, in an elderly woman; and were removed by cutting into them and emptying their contents, and then removing the cysts. One of them gave a good deal of trouble, in consequence of its having been opened at some former period, which had condensed it, and caused it to adhere intimately to the skin; and the vessels, from the same cause, bled a good deal after the woman returned to her ward.

The operation on the toe consisted of the removal of an irritable ulcer round the root of the great toe nail, together with the nail itself in a soft and diseased state, and the portion of cutis from which the nail grows. The girl was very anxious to have the toe amputated, in consequence of the suffering she had experienced from the disease, but was persuaded to have this done instead; and it appears, by her freedom from the pain she used to feel, that the operation is likely to answer.

ROYAL INSTITUTION.

Friday, March 3, 1837.

On the Polarization of Light.

Mr. Woodward, President of the Islington Literary and Scientific Institution, gave an interesting account of some of the properties of polarized light, illustrated by pasteboard models, and by the hydro-oxygen polarizing apparatus.

The lecturer began by noticing the two theories of light, and the changes which have occurred in the opinions of philosophers with respect to the physical cause of luminous phenomena. After mentioning the Newtonian objections to the undulatory theory, the lecturer replied to them, and adduced the phenomena of interferences as fatal to the corpuscular hypothesis. Fresnel's theory of the two rectangular planes of vibration was illustrated by pasteboard models, and Cauchet's third rectangular plane also alluded to. By the same models were explained, on the principles of the undulatory theory, the differences between polarized and unpolarized light, and in what way the properties of *sides* possessed by the former might be accounted for. The interference of polarized light was then referred to, and the production of colour in certain experiments thereby explained. The two rays produced by doubly refracting bodies were shown to be polarized, and their relative position and properties explained on the undulatory theory, by models.

The hydro-oxygen polarizing apparatus consists of two parts—one for the production of an intense light, the other for its polarization. The light is produced by the ignition of a cylinder of lime, (contained in a wooden box,) by the hydro-oxygen flame; the mixed gas is placed in a Gurney's blow-pipe, the safety portion being two-fold—namely, a Hemming's jet, and a chamber filled with numerous layers of wire gauze. In the front of the box is a circular aperture, to which the optical apparatus was attached. For shewing the two images produced by double refracting crystals, one doubly convex lens was used, of $1\frac{3}{4}$ inches focus; and in front of this was placed the calc spar. The two images were thrown on a white opaque screen. For other polarizing experiments, three lenses were employed, not actually plano-convex, but what are technically termed crossed, the first in the proportion of $1\frac{1}{8}$ to 6, and the second and third in those of $1\frac{1}{16}$ to 4. The diameter of the first lens was $1\frac{5}{8}$ inches; of the second and third $1\frac{1}{8}$ inches: the focus of the first, 2 inches; of the second and third, $1\frac{3}{4}$ inches. The first and second lenses form a positive eye-piece, and are so placed that their sides of

greatest convexity shall not quite touch. The third lens is brought within a quarter of an inch of the second, by which means a strong light is produced, which is polarized by transmission through a plate of tourmaline; and when a crystal is placed between this polarizing and the second, or analyzing, plate, the light is thus strongly condensed on the crystal.

By this apparatus the lecturer was enabled to shew many of the splendid phenomena of polarized light with the most brilliant success. The coloured rings caused by calc spar, topaz, borax, nitre, arragonite, and quartz, were shewn of colossal size, and of great brilliancy, on the opaque screen. On the whole, it was one of the most successful exhibitions of polarized phenomena yet attempted in the lecture room.

EIGHTEEN TAPE-WORMS IN A SINGLE PATIENT!

Communicated by

Dr. Ettmüller to Dr. Radius.

The patient in this case was a young woman, aged 22, of a robust constitution, and who had never laboured under any remarkable affection. Soon after the appearance of the catamenia, she was attacked at irregular intervals with pain in the abdomen, and a gnawing sensation in the intestines, alternating with diarrhœa, sometimes referrible to errors in diet, sometimes occurring without any apparent cause. On many occasions, she was suddenly attacked during her meals with uneasiness and vertigo, which, however, were in general of brief duration. She was also from time to time seized with a violent pain in the belly, which she could not accurately describe, and on such occasions obtained instantaneous, but transitory relief, by taking *a draught of very cold water**. She frequently laboured under heartburn, but never vomited; and was subject to fits of oppression of breathing, sighing, and sometimes constant yawning. She suffered much from hemicrania of the right side, particularly over the eye and forehead, a constant sense of pressure on the globe of the eye, dilatation of the pupils, and swelling of the upper eyelids, giving to her eyes a half-closed, sleepy look. She also complained of pain running from the point of the left shoulder along the collar bone to the sternum, a feeling of stiffness in the limbs, and cramps in the calves of her legs. The catamenia were slow, usually only once every five weeks, and occasionally alternated with leucorrhœa. Her complexion was yellowish and clay-coloured, her disposition very variable, being sometimes peevish and irritable, sometimes extremely mild. There was no abdominal tenderness present.

She had been treated for amenorrhœa and disease of the liver, and subsequently by Dr. Ettmüller for derangement of the digestive system, for the space of two years, during which no trace of tape-worm appeared. In February 1836, she began to pass small pieces, and this induced him to have recourse to anthelmintics. The treatment employed was that recommended by Schmidt. The preparatory mixture brought away several pieces, from a quarter to half an ell in length. On the 8th of March she took one of Schmidt's pills every hour, from six to eleven o'clock, A.M. She vomited twice during the day, and passed several fluid evacuations, containing several joints of tape-worm. At two, P.M. she was obliged to discontinue the pills, in consequence of the violent retching and gastrodynia which they produced, and took castor oil in half-ounce doses, which she also gave up after the third dose. Towards evening the vomiting ceased, and she fell asleep for about an hour. On awaking she passed a knot of worms, which, when uncoiled, proved to be four entire tape-worms. About one o'clock in the morning, she awoke again with a violent pain in the abdomen, and passed nine more*. She took the same medicine again twice during the two following weeks, and had several slimy discharges from the bowels, without any trace of tape-worm, so that her cure was considered to be complete; and, with the view of improving the digestive function, she was ordered to the medicinal waters at Franzensbrunn. Two days, however, before her departure she passed a portion of tape-worm, and another in July. On her return to Oberwiesenthal in August, she passed two more entire worms. She was now ordered to take the decoct. cortieis granati, ℥iij. ad Oj. night and morning. This was continued for five days, and then followed by an active purgative, which brought away three entire worms. In order, however, to render the cure more certain, she was directed to take the decoction a few days longer, and afterwards the compound infusion of senna occasionally. Up to the 24th of December no further traces of tape-worm had been observed†.

* Rosenstein regards this as a pathognomonic sign.

* These worms were sent to Dr. Radius, and exhibited by him to the Medical Society at Leipzig. They were all furnished with heads, but had contracted so much from lying in the spirits of wine, that the longest did not measure more than two feet.

† Clarus and Radius's Journal, Band. 3, Heft. 2; and Dublin Journal, March 1837.

TONGUE SWALLOWING.

A curious case has been related which links physiology with practice. An infant was labouring under symptoms suddenly arising, and seeming to threaten death by suffocation; the physician, fortunately, discovered that the tongue was retroverted, its apex reaching into the œsophagus; the tongue was readily replaced, with relief to all the symptoms, but the trouble recurred frequently. Many authors have mentioned this *swallowing* of the tongue; I knew one instance where it could be done at will without any serious inconvenience. This occurred in a lad, who, in the playful period of his recovery from fever, was asked to shew his tongue and presented his open mouth with no tongue visible; as soon as his mouth was shut, he asserted that his tongue was in its right place, proving it to be so: there was such facility in retroverting the tongue into the pharynx, that he frequently repeated the trick afterwards. The only other recent instance I have found related, is somewhere recorded on the authority of Magendie. Yet M. Blandin (Art. *Langue*, in *Dictionnaire de Méd. et de Chir. Pratiques*) follows Boyer in denying that such a displacement can be thus produced, and places the accounts of slaves suffocating themselves by tongue-swallowing "amongst the romances of our science."—*Mr. Crosse's Retrospective Address.*

POOR-LAW COMMITTEE.

The members of the Parliamentary Poor-law Committee commenced their labours on Monday last. It is understood that the medical part of the inquiry will not be entered upon till after Easter.

COLLEGE OF SURGEONS.

LIST OF GENTLEMEN WHO RECEIVED DIPLOMAS IN FEBRURY.

Alfred Jones, Havre-de-Grace.
S. Lupton, Thame, Oxfordshire.
William Kemm, Averbury House, Wilts.
Morgan Williams, Llandelo.
Edwin Haward, Halesworth.
R. Druitt, Southampton Buildings.
Isaac Reaney, Sheffield.
E. V. Austin, Norwood.
T. Maitland, Exeter.
Richard Shelan.
J. B. Robertson, Demerara.
Henry Mansell, E. I.
F. Palmer, Great Yarmouth.
C. Wood, Smyrna.
E. Smiles, Newcastle-upon-Tyne.
M. Nightingale, Bengal.
C. Hawkins, Montague Place, Montague Square.
W. H. Barnwell, Queen Charlotte Row, Lisson Grove.
C. T. Hamilton, London.
H. Samuel, Mansell-street, Goodman's Fields.
G. W. Pinchin, Limerick.
James Gibson, Hull.

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

March 9, 1837.

William Wardlow Howard, of Glossop.
William Matterson, of York.
William Veal.
James Fletcher, of Oldham.
Thomas Mousley, of Ellesmere, Salop.
John Cozens Kent, of London.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Mar.* 7, 1837.

Abscess	1	Inflammation	23
Age and Debility	32	Bowels & Stomach	3
Apoplexy	2	Brain	3
Asthma	20	Lungs and Pleura	9
Cancer	3	Influenza	4
Consumption	64	Insanity	3
Convulsions	26	Jaundice	2
Croup	1	Measles	2
Dentition or Teething	6	Mortification	1
Dropsy	8	Paralysis	2
Dropsy in the Brain	5	Small-pox	3
Fever	6	Sore Throat and Quinsey	1
Fever, Scarlet	6	Spasms	1
Fever, Typhus	3	Thrush	1
Gout	1	Unknown Causes	4
Hæmorrhage	1		
Heart, diseased	1	Casualties	4
Hooping Cough	10		

Decrease of Burials, as compared with the preceding week . . 59

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ W. *of Greenwich.*

March.	THERMOMETER.		BAROMETER.	
Thursday . 2	from 25	to 41	30·26	to 30·16
Friday . . 3	25	43	30·18	30·11
Saturday . 4	32	43	29·97	30·04
Sunday . . 5	26	47	30·02	29·83
Monday . . 6	33	44	29·84	29 93
Tuesday . . 7	29	46	29·96	30 06
Wednesday 8	25	48	30·10	30·06

Winds N.E. and W. by N.

Except the 7th and morning of the 8th, generally cloudy; a little rain on the evenings of the 4th and 5th.

CHARLES HENRY ADAMS.

CORRIGENDUM. — In INVESTIGATOR'S letter, last number, p. 877, line 1, col. 2, *for* "It is not, therefore, the kind of inflammation which we occasionally meet with in such diseases as typhus fever and the present epidemic, that we are to look for proofs of the soundness of Mr. Searle's doctrine; nor is it to acute idiopathic peritonitis, enteritis, &c." *read thus*—"It is not, therefore, *to* the kind of inflammation which we occasionally meet with in such diseases as typhus fever and the present epidemic, that we are to look for proofs of the soundness of Mr. Searle's doctrine: *no, it is to* acute idiopathic peritonitis, enteritis, pneumonia, or phrenitis, that we ought to turn our eyes."

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THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 18, 1837.

LECTURES

ON

FORENSIC MEDICINE;

Delivered at the Aldersgate School of Medicine,

By William Cummin, M.D.

Lecture XXIV.

Unsoundness of Mind *further considered. Imbecility and its characteristics—Commission de lunatico inquirendo—Miss Bagster's case—Medical evidence on that inquiry—The money and figure test to be applied with discretion. Demi-imbeciles. Deaf and Dumb state — how far connected with imbecility—Persons in that state sometimes not responsible, nor capable of being put on their trial. Cretinism. Mania and its characteristics—Plausible reasoning of some maniacs—Example from the Scotch judicature. Monomania: its characters—With depression—With gaiety—Predominant ideas often changing—Case in illustration—Difficulty sometimes in discovering the subject of the delusion—Anecdotes by Lords Mansfield and Erskine.*

In the last lecture I pointed out some of the difficulties which have long beset the subject of unsoundness of mind; and I endeavoured to show how, by the adoption of a series of well-defined terms, and a proper classification, they might in great measure be removed. I also laid before you a plan, which at one view exhibited the mutual relation of all the principal kinds of mental disorder at present recognized by the ablest psychologists, and I went into a detailed account of idiocy and imbecility,—forms of unsoundness which essentially consist in deficiency of mental power.

Imbecility.

In resuming my observations on imbecility, I must remind you of the remarkable trial which I adduced in last lecture as illustrative of the extent to which weakness of intellect may exist, without disqualifying the individual for making a valid will. The medical evidence in that case would seem to have been sufficient to convince any tribunal that there was a decided lack of disposing memory, and a deficiency of reason and understanding inconsistent with a sane devise. But the verdicts of juries are very precarious on these occasions, as may be exemplified by the case of Miss Bagster, a young lady of weak, or rather grossly neglected, mind, (though certainly possessed of a much higher capacity than Frances Smith), who upon contracting an objectionable marriage, was found *non compos*, and afterwards divorced.

Miss Bagster's case. — The proceedings in this case were interesting and instructive, particularly in displaying the methods adopted by some of our "mad doctors," in ascertaining the existence of imbecility with incompetence for managing one's own affairs.

The young lady in question, who was about twenty-two years of age at the time of her elopement and marriage, had been a spoiled child from infancy. She was an only daughter, and treated with a foolish fondness by her grandfather, from whom she was to inherit a very large property. She was brought up in a complete state of dependence on others; all her wishes were gratified without any exertion of mind on her part: she was taught nothing that could give her the least trouble or annoyance in the learning. The management of her temper was also neglected, and school-mistresses and governesses could abundantly testify to various unseemly ebullitions which they had witnessed.

In this state of things, though she cannot be said to have ever arrived at years of discretion, she attained her majority, became legally the mistress of herself and her

property, had her speculations of marriage on hand, and was persuaded by one of her suitors to elope with him. But the person whom she got in this way for a husband, happened to be no favourite of her mother's; and the latter was known to have vowed that he should have her heart's blood rather than her child. There was but one mode of dispossessing him after the union, and that was by proving that the marriage was contracted while the lady was unsound of mind. A writ *de lunatico inquirendo* was obtained, and after an investigation, which lasted eleven days, the desired verdict was returned *.

Let us direct our attention for a few minutes to the medical evidence. Dr. Macmichael was first examined, and deposed that he visited Miss Bagster, in company with Dr. Munroe. She did not appear to be a person of sound intellect, or to possess the ordinary moral perception of a person of her age. The conversation was of a very general and diversified nature: she related all the circumstances of her elopement. "I examined her respecting *figures*, but she seemed perfectly ignorant of how many pence there were in a shilling. I think she has no reasoning faculty whatever. She said there were six weeks in the year, and six days in the week, and as for Sunday, that was kept holy. I wrote down a common sum in addition, but she could not manage it, and said she was very stupid. She could not add shillings and penee together. I do not think she is competent to manage her own affairs, nor to be trusted with any money. In my opinion she is of unsound mind."

It must be confessed that this looks very like jumping to a conclusion: the girl had been almost wholly uninstructed in arithmetical calculations, and her "tables," it seems, she had always been excused from committing to memory: yet her deficiency in these points, her ignorance, is set down to deficiency of mental power, and she is pronounced incompetent to manage her own affairs.

Dr. Munroe said he was struck with her appearance and manner, which were quite childish: from her physical development, she semed to be no more than sixteen or seventeen years of age. He and Dr. Macmichael were introduced as friends of Alderman Kelly, in whose house Miss Bagster then resided. She talked freely about the elopement and marriage at Gretna Green. "At another visit, I put to her some *arithmetical questions*: she knew that two and two made four, and four and two made six; but six and four, she said, made eleven, but corrected herself afterwards, and said ten. She could not tell how many shillings were in a crown, or a sovereign, nor how many tens in an hundred. She said there were six weeks in a year, and when I expressed my dissatisfaction, asked me, 'Is not that right, sir?' Her fortune, she said, added to the Alderman's, would be immense; her's was 700*l.* a-year, his 100*l.* I asked, 'No more?' She then said 150*l.* She knew not how many months in the year. She is decidedly of unsound mind, and not in any degree fit to take care of herself or her property. I should not call her idiotic, or lunatic, but I should describe the state of her mind as that of extreme imbecility. The power of learning language to the extent that Miss Bagster knows French, is consistent with what is called imbecility. I have not the slightest doubt that she is imbecile."

Drs. Sutherland and Gordon deposed to having had very free and confidential conversations with Miss Bagster, relative to the matrimonial trip: she considered it as "a bit of fun." The former gentleman tried her by the *arithmetical test*, and both found her imbecile and of unsound mind.

Another physician improved on the figure test; he examined her touching the interest of money, the expenses of a carriage and horses, and the price of quartern loaves! Only think of Miss Bagster, with the edueation she received, being asked such a question as this,—we give it from the report of the trial. "I asked her, if she had 10,000*l.* in the *four per cents.*, how much ought to be her income? She answered, 100*l.* a-year. She said she should take a great house at the West End, and keep a number of servants; but she doubted if she could afford to keep a carriage at the same time... Among other questions, I asked her, what would she give for a quartern loaf? She said two shillings. She was aware that twenty shillings made a sovereign, and twenty pence one and eightpence; but she said that fifty sovereigns were twice as much as a 50*l.* note..... I asked her what would be the expense of a carriage and pair of horses? She said, 'I should think, from 20*l.* to 30*l.* a-year.' He considered her to be of insane mind."

That the arithmetical and money test affords, in many instances, a valuable means of estimating the degree of imbecility, there can be no doubt; but the quotations just made must satisfy most persons that it may be resorted to very absurdly in those cases where the individual has never had an opportunity of acquiring ideas of numbers.

But let us contrast the money-testing method of the physicians just cited with the mode adopted by two other eminent authorities, in the same case. Dr. Alexander Morison, the present physician

* Medical Gazette, vol. x. p. 519.

to Bethlem Hospital, visited Miss Bagster four times previous to the inquiry. "On my first visit," said the Doctor, "she received me politely; said she was in good health, but that she was a little deaf, as she thought, from nervousness. I proceeded to ask her some questions. She told me she had neglected her arithmetic, and was not fond of it. She talked about the Opera, Paganini, Sir W. Scott, and the Exhibition; of a journey she had once taken to Wales. She asked me what was a mad-doctor, and if I was one? I told her no; that I cured all diseases if I could. I then asked her if she had any money in her purse? She said, no; I have no occasion for any, for every thing is bought for me. On my second visit she shook hands with me, and asked after the health of my daughters. She complained of being very nervous, from seeing so many persons, and having to answer so many questions as to her state of mind. She said that Dr. Haslam had frightened her very much, by telling her he was a mad-doctor. On asking her how she became so defective in her arithmetic, she said that her grandfather was very fond of her, and indulged her too much, and would never allow her to be teased about it. She said she could read French, and "Telemachus," fluently. Talking of her trip to Gretna-Green, it was a foolish thing, she said, but you know one reads such things in novels; but I am sure I would not have done so if I thought there would have been all this trouble about it. After some further conversation, she asked me, What do you think of my capacity? I told her that I considered her to be very deficient in her arithmetic, but that I did not think her possessed of less sense than many young ladies of her own age. She asked me if I thought she had as much capacity as was necessary? I said I thought she had. Speaking of her fortune, she said her mother never let her have any money—not even a penny to give to a beggar; and that she had no opportunity of knowing the value of money. After this, she asked a great many questions about the law proceedings which were about to take place; and, finally, without any question, said, 'I have been very violent, and passionate, and undutiful to my mother, for I have sometimes pulled and slapt her, and I am very sensible of the impropriety of my conduct.' My third visit was a very short one. I examined her again upon figures: she put down the first four figures under each other, and in a little time made out ten. She complained of being unwell, from the effect of seeing so many doctors. At my last visit I said, now you are married, how do you think you ought to sign your name? She said I think it ought to be Newton; but those about me say it was not a marriage, as it was not done in church. I am told by those about me, particularly by Miss Clayton, that Alderman Kelly is in love with me, and will marry me in three months, and I may be Lady Mayoress next year. I said, well, do you think that your marriage with Mr. Newton is not a good one, that you may marry Alderman Kelly? She said, no. I asked her what would her marrying be? She replied, adultery. I have directed much of my attention to insanity of late years, and have written two works on the subject. Miss Bagster is a little deaf, and in that respect only is different from other young ladies. I did not observe the slightest disposition to laugh without cause: she had not the unmeaning laugh and titter of those who are weak in mind. The statements she made I believe to be true, believing her to be a reasonable creature, and that she would not deceive me. I do not believe that her governess had fallen upon the proper mode of instructing her, and *I would undertake in six months to teach her arithmetic and the use of money.* She has begun to think now, and her mind is more opened than it was a year ago, and I think if pains were taken with her, she might be instructed. Such a communication as she is represented to have made to Captain Kelly was very indecent and strange, but in my opinion not inconsistent with sanity. I think that late occurrences, coupled with the repeated conversations with the medical men on these indelicate subjects, have so lessened her sense of modesty, as to account for it. A deficiency of education will account for all the appearances observed in Miss Bagster. *Her incompetency to manage her affairs arises, not from unsoundness of mind, but from ignorance.* She is capable of instruction, so as to be able to manage her affairs. The indulgence of her grandfather, the conduct of her mother towards her, and the frequent change of her teachers, were calculated to produce the results which we see. I hold her to be a responsible agent. She has this proof of soundness of mind, that she is sensible of the deficiencies under which she labours; one test of non-insanity is a consciousness of deficiency."

Such evidence as this is highly satisfactory, consisting, as it does, of a body of facts and opinions collected in an honest straightforward manner, without any deception practised on the alleged imbecile. We find it confirmed, too, by the evidence of Miss Bagster herself before the Commissioners, which is extremely well worth

perusing, and very remarkable, considering the circumstances under which it was given.

But I must not conclude my notice of this case without quoting some passages from Dr. Haslam's evidence. The Doctor has long professed to be a master of evidence, and of the conduct befitting a witness when placed in the box; yet somehow it has frequently befallen himself to be betrayed into extravagances, and unseemly sparring with counsel. In the following extracts, which bear more immediately on the question under consideration, will be observed one or two passages which may serve to point out certain things which ought to be carefully avoided in giving evidence before courts of justice.

Dr. Haslam visited Miss Bagster thrice. On the first occasion the conversation was very general; on the second, Dr. H. announced that he was a "mad doctor," and rendered the lady very nervous; she shed tears, &c. "At my next visit, continued the Dr., I opened a Prayer-book, and desired her to read the seventh commandment, which she did correctly. Do you know, I said, what is meant by committing adultery? Her answer was, when persons are married they shall not have any thing to do with any other man than their own husband. Of her own accord she lamented her deficiency in arithmetic, and her ignorance of the value of money. I then said to her, Do you think you could soon acquire it under proper tuition? She took up those words—Yes; under proper tuition, being allowed to have money and keep accounts, I have no doubt I could learn like other persons: my grandfather was so fond of me that he would not allow the teachers to snub me for neglecting my lessons. From these three interviews I am able to form a correct opinion of her state of mind. She is not a lunatic, she is not an idiot, nor is she of unsound mind.

"*Mr. Pollock:* Is she of *sound* mind?—I never saw any human being who was of sound mind. That is no answer to my question: is she of sound mind? I presume the Deity is of sound mind, and he alone. Is that your answer, sir? I presume that the Deity alone is of sound mind. How many years have you been a mad-doctor? About forty. Where did you learn that the Deity was of sound mind? From my own reflections during the last fourteen years, and from repeated conversations with the best divines in the country. Is Miss Bagster of sound mind? Competently sound. Is she capable of managing herself and her affairs? I do not know what affairs she has to manage. Is she competent to act as the mistress of a family? When properly instructed, I think she would be: I mean to state that when certain defects have been supplied, she would be as capable to conduct her affairs as any other woman. Do you understand that with the exception of her defects in education, she is competent to the ordinary affairs of life? I do. Do you think that a part of her disabilities might be removed by education? I am persuaded of it. Supposing she was taught in the best manner, and by the ablest masters, what length of time would it take? You must state the quantity of learning to be obtained; she is particularly deficient in arithmetic. And what else is she deficient in? Music. Those qualifications are not necessary to enable her to manage the affairs of life? They are certainly not essential. How often have you given evidence before commissioners of lunacy and a jury? I cannot tell; I don't know. Have you any notion? Notion is very much like knowledge, and I don't know. Have you any idea? An idea is a visible perception, and a direct recollection(?). Have you any belief? I cannot say that I have any belief, for that is a direct recollection. Can you, from any faculty of your mind, give information on the subject? Many times and oft I have given evidence on a commission of lunacy; but when I was first examined, or how much time has intervened since, I cannot tell. I did not visit Miss Bagster to repeat arithmetical questions, because she told me she knew nothing about them. I did not go there to puzzle her, though I could easily have done that with many others besides. She is competent to learn arithmetic, but she has not been allowed the materials—I mean money, the great source of all arithmetic."

I have already mentioned what was the issue of the inquiry—a verdict of unsoundness of mind, and incompetency to the management of her affairs. It was certainly a popular finding, for had the verdict been otherwise—had Miss Bagster been found of competent understanding—her person and property would have remained at the disposal of the party who had clandestinely contrived the marriage. Doubt, however, may still be reasonably entertained, whether the verdict was correct, or in strict accordance with truth and justice.

Before I quit the subject, I ought to mention that you may see one or two excellent cases in Dr. Abererombie's book on the Intellectual Powers, in which the money and number test was judiciously employed in "cognoscing" imbeciles.

Demi imbeciles.—Orfila describes a class

of unfortunates whom he considers as irresponsible, although they frequently become objects of punishment before the criminal tribunals. They are *demi-imbeciles*, he says, of very limited mental power, and most imperfectly acquainted with those great truths on which social order is based. Among the lower classes, these persons may find a variety of occupations, which require no particular talent for combining ideas; some of them even learn simple trades. Though they may not pass as wholly imbecile among their equals, they are looked upon as singular beings—simpletons—and are made the subject of a thousand tricks and jokes. Many of these individuals, not being restrained by any principle, are given to drink, laziness, or debauchery; and more of them probably fall into the hands of justice than the public are generally aware of. They are dexterous in thieving, and are thought to be very cunning: on leaving prison they begin their old trade afresh, and are thus accounted inveterate culprits. They are sometimes violent, passionate, committing homicide or arson upon the least provocation: those, too, who have strong sexual propensities, are easily betrayed into outrages on modesty. "I have had occasion to notice several individuals of this description in our prisons, who were pronounced reasonable and responsible, yet whose demi-imbecility was to me quite manifest."

It is to be feared that many of the young desperadoes who figure frequently before our police magistrates, and are as often sent to the treadmill or solitary confinement, are of this description of demi-imbecile. Our magistrates, however deep observers of character, are generally not gifted with a discrimination whereby nicely to distinguish between the responsible and irresponsible; nor in the pressure of business have they the needful leisure for such distinctions.

Deaf and dumb state.—You will recollect that when stating the legal distinctions respecting unsoundness of mind, I mentioned that the person who was born deaf, dumb, and blind, was held in the rank of an idiot, being precluded from the principal ideas of sensation, the foundation of all knowledge. An individual who is deaf and dumb, however, is recognized as responsible when there is evidence of his being able to comprehend the difference between right and wrong, and may be put on his trial, if he can be made to understand the nature of pleading guilty or not guilty. In Dr. Beck's Elements you will see a full account of the proceedings adopted some years ago in one of the criminal courts of Scotland, for putting a deaf and dumb woman on her trial, charged with destroying her infant child by drowning. She was in the end suffered to go at large, untried.

The question of dumbness must be determined by a jury before it can be admitted as a plea for declining trial. If it be proved malicious and pretended, the plea of "not guilty" is to be entered, and the trial proceeded with. Formerly the obstinate pretender was *forced* to plead by whipcord bound round his thumbs: one form of the "thumb torture."

The matter has long since been put beyond a question, that where proper methods of education, like those of the Abbé Sicard and others, have been applied to the deaf and dumb, they are capable of being rendered intelligent and virtuous members of society; and individuals of this class have even evinced powers of mind remarkable for acuteness and sagacity. But, on the other hand, when such beings have been neglected, their uncultivated minds have sometimes rendered them a curse to their fellow creatures: they have indulged in every vice within their reach, and have not hesitated to commit violence when it seemed necessary to enable them to attain their purpose. Such persons are obviously imbecile, and cannot be held accountable for their actions. The difficulty in disposing of them when they come before the legal tribunals, consists in ascertaining the extent of their mental culture, and above all, to determine whether they do not dissemble their attainments in respect to education. Experienced persons must be entrusted with this inquiry; and by such means many desperate impostors have been detected, as we shall hereafter have occasion to notice more particularly when treating of feigned and dissembled states.

Cretinism.—I cannot close this sketch of imbecility without reading for you Dr. Abercrombie's account of the modifications of intellect found among the Cretins of the Vallais. It shows very distinct gradations of deficiency in connexion with bodily disease.

"These singular beings are usually divided into three classes, which receive the names of cretins, semi-cretins, and cretins of the third degree. The first of these classes, or perfect cretins, are, in point of intellect, scarcely removed above mere animal life. Many of them cannot speak, and are only so far sensible of the common calls of nature as to go, when excited by hunger, to places where they have been accustomed to receive their food. The rest of their time is spent, either in basking in the sun, or sitting by the fire, without any trace of intelligence. The next class, or semi-cretins, show a higher degree of intelligence; they remember common

events, understand what is said to them, and express themselves in an intelligible manner on the most common subjects. They are taught to repeat prayers, but scarcely appear to annex any meaning to the words they employ; and they cannot be taught to read or write, or even to number their fingers. The cretins of the third degree learn to read and write, though with very little understanding of what they read, except on the most common topics. But they are acutely alive to their own interest, and extremely litigious. They are without prudence or discretion in the direction of their affairs, and the regulation of their conduct; yet obstinate, and unwilling to be advised. Their memory is good as to what they have seen or heard, and they learn to imitate what they have observed in various arts, as machinery, painting, sculpture, and architecture; but it is mere imitation without invention. Some of them learn music in the same manner; and others attempt poetry of the lowest kind, distinguished by mere rhyme. It is said that none of them can be taught arithmetic, but I do not know whether this has been ascertained to be invariably true; there is no doubt that it is a very general peculiarity."

Mania.

The essential character of this form of derangement (we have now disposed of the forms of deficiency) is a general confusion and incoherence of ideas, succeeding each other with a morbid rapidity, and without any apparent connexion. The perceptions are erroneous. Many maniacs mistake their relations and friends for strangers and enemies: they suppose a window a door, and thus precipitate themselves into the street. These are *illusions* affecting the senses; they have *hallucinations* also, or perceptions of the imagination, without corresponding external objects. They see multitudes of objects which do not exist. They hear voices addressing them, and frequently prompting to the perpetration of some crime. They are subject to violent passion, contempt, suspicion, anger, and hatred; permanent hallucinations, however, are rare: the attention cannot be fixed, the memory is greatly disturbed, and consciousness of existence seems lost. The sense of taste is frequently perverted, and maniacs often refuse wholesome food, preferring offal or any kind of garbage. From the quick succession of their ideas, those who are given to talk have a most plentiful volubility of words, and those who can still write produce compositions of enormous length in a very limited space of time. Their powers of volition are vague and unsteady, and there is an irresistible tendency to motion. The muscular power is frequently increased: there is a strong disposition to act from the impulse of the moment; and exacerbations of excitement, giving rise to fits of fury, are frequent.

But there are shades and varieties among maniacs; they do not all labour under perversion of *all* the senses; sometimes but one, sometimes two, or three, or four, of the senses are involved. Power of comparison is more or less wanting, according to the degree of deficiency of attention and memory.

Mania has, in fact, been subdivided into three species: — 1. Where there is the greatest confusion of the intellectual powers; the ideas erroneous, rapid, and incoherent; illusions and hallucinations prevalent, with a tendency to be readily excited to fury. The maniac recognizes nothing around him; cries aloud, sings, and is constantly in motion; forgets the first wants of nature, and seems destitute of all feeling of cold, heat, or pain. 2. In the second species the maniac is in a state of disturbance, but not to such a degree as to be incapable of having his attention fixed; his answers are correct and to the point, but short. More lengthened conversation discovers the nature of his derangement: all his thoughts are observed to be extravagant; he laughs, sings, becomes excited, and readily flies into fury. 3. In the third kind we have a sort of "reasoning madness," as some have erroneously described it. The individual talks, writes, judges, and appears to reason; while, by a singular contrast, he commits the most obviously extravagant or outrageous actions, yet always finding some plausible plea to justify his proceedings. Perhaps one of the best examples of this species may be found in the well-known case of a Scotch clergyman, which is thus concisely related and commented upon by Dr. Abercrombie:

"A clergyman in Scotland, after showing various extravagances of conduct, was brought before a jury to be cognosced; that is, by a form of Scotch law, to be declared incapable of managing his own affairs, and placed under the care of trustees. Among the acts of extravagance alleged against him was, that he had burnt his library. When he was asked by the jury what account he could give of this part of his conduct, he replied in the following terms:—'In the early part of my life I had imbibed a liking for a most unprofitable study, namely, controversial divinity. On reviewing my library, I found a great part of it to consist of books of this description; and I was so anxious that my family should not be led to follow the same pursuit, that I determined to burn the whole.' He gave answers equally plausible to questions which were

put to him respecting other parts of his conduct. [Among other strange acts, he dug up and destroyed a fine orchard, but pleaded that digging was good for his health, and that he preferred a garden to an orchard.] The result was, that the jury found no sufficient ground for cognoscing him; but, in the course of a fortnight from that time, he was in a state of decided mania.

"It is, therefore, incorrect (continues Dr. Abererombie) to say of insanity, as has been said, that the maniae reasons correctly upon unsound data. His data may be unsound, that is, they may consist of a mental image which is purely visionary, as in the state of perfect mania lately referred to; but this is by no means neeessary to constitute the disease; for his premises may be sound, though he distorts them in the results which he deduces from them. This was remarkably the case in the clergyman now mentioned. His premises were sound and consistent, namely, his opinion of the unprofitable nature of the study of controversial divinity, and his anxiety that his family should not prosecute it. His insanity consisted in the rapid and partial view which he took of the means for accomplishing his purpose, —burning his whole library. Had he sold his library, or that part of it which consisted of controversial divinity, the measure would have been in correct relation to the object which he had in view; and if we suppose that, in going over his library, he had met with some books of an immoral tendency,—to have burnt these, to prevent them from falling into the hands of any individual, would have been the act both of a wise and a virtuous man. But to burn his whole library, to prevent his family from studying controversial divinity, was the suggestion of insanity; distorting entirely the true relation of things, and carrying an impression, in itself correct, into consequences which it in no degree warranted."

Monomania.

That form of derangement first distinguished by Esquirol with the appropriate appellation of monomania, is characterized by a delusion relating to a small number of predominant and exclusive ideas, the judgment being often sufficiently sound on every other subject. In monomania the attention is generally fixed on the predominant wrong ideas, while in mania there is such an incoherence and diversity of ideas and actions, as to show that the patient thinks and acts at random.

In monomania with depression, the *melancholia* of the old writers, or lypemania of Esquirol, the expression of the countenance is anxious; the complexion is sometimes a dark red, the features being gathered up and motionless; sometimes the tint is sallow. Ideas of terror, distrust, suspicion, and gloominess, prevail; hallucinations are frequent: the patient seeks to be alone, avoids exercise, talks but little; all the bodily functions proceed heavily.

In that form which is marked by gaiety or cheerfulness, the chæromania of Esquirol, the countenance is animated, and the eyes often brilliant; the patients are full of activity, bold, petulant, noisy, boasting; and their functions are carried on as in health. They often fancy themselves magnificent, rich, and prosperous, great kings, princes, and ministers: sometimes they personate the Deity himself: some are poets, orators, or great discoverers. Some again are victims to the passion of love, and are carried away by corresponding illusions. Hallucinations also are frequent with them.

From this description of monomania it must be perceived that the variety of which it is susceptible is indefinite, and accordingly there are frequently met with examples of the most novel and extraordinary kind. It is worth observing also, that the predominant ideas often shift and change in the same individual; he labours under a succession of delusions, each prevailing for a time.

A very curious instance of derangement of this kind is displayed in the following case, which will also serve to shew in what a condition of mind a jury may be disposed to consider a person capable of performing a valid or legal act. There is also involved in it the question of a *lucid interval*, one of much importanee in legal medicine, which will have to be noticed more particularly hereafter.

In the sittings at Nisi Prius in the King's Bench, in 1809, an action on an annuity bond was brought by a Miss Faulder against the exeeutors and heir of Thomas Clerk Jervoice: the defence was lunacy of the obligor. The young lady had been the mistress of Mr. Jervoice from the age of eighteen, cohabiting with him for twelve years, and conducting herself throughout with singular propriety, and paying every possible attention to his welfare. When he executed the bond in her favour, he did it with peculiar caution, and the preparers of the instruments and the attesting witnesses bore strong testimony to his competency for the act. The bond bore date 1808. The following facts were adduced in evidence by the defendants. The lunatic, on the death of his grandmother in the year 1802, became possessed of an estate in Hampshire, whither he immediately repaired, and whilst the corpse was yet unburied, pulled down the chimneys and levelled the walls of the

mansion, himself living in a marquee, sleeping in a stable or a summer-house, and cooking his victuals with his own hands under a tree in a favourite vessel, which he called his *conjuror*. The carriage of his grandmother was painted black, by his directions, and exposed for sale under the name of Black Jack. Upon the death of his father, he came into the possession of the family estate and residence, situated at West Bromwich, in Staffordshire, whither he repaired, and made a bonfire of all the furniture, himself superintending the conflagration. It was his practice to ride about the country on a jackass, dressed in a white hat, blue trowsers, red morocco slippers, with a flannel shirt next his skin, and over that a white linen shirt, without either coat or waistcoat, wearing sometimes a waggoner's frock. His usual places of residence were tents, stable-yards, or coach-houses, where he cooked his victuals, and even shaved himself, in his beloved *conjuror*, occasionally sleeping on the boards of a parlour, or the stones of a hall. Much of his time was spent in travelling—his carriage being always filled with pots, pans, silver plates, old china, a bunch of large keys, picklocks to the number of one hundred and fifty, and his inseparable *conjuror*. A carriage which he once made use of was unpainted, until a sudden freak induced him to order three female domestics to paint it on a Sunday, and then he rode out in it, the paint being wet. Fishwomen were frequently called to him as they were passing by, whose fish he purchased, and whom he employed in mending the lining of his carriages with the peticoats of his maid-servants. His female domestics, particularly a woman of the name of Elizabeth Savage, whom he picked up at Birmingham, were the companions of his journeys; and he would frequently stop at night on the high roads, making tea and cooking his victuals; on one occasion he performed the process of cooking at midnight on Bagshot Heath, with numerous candles burning around him, to the no small surprise and entertainment of travellers. Staircases became the objects of his aversion, for he thought them unsightly things; and caused the staircase of his house at Egham to be taken down, substituting a ladder in its stead; passages were moreover cut through the ceilings, through which his servants were sometimes obliged to raise themselves into their chambers by ropes and pullies: himself occasionally sleeping on the boards of the ground-floor. To his own chamber (when he made use of one) he clambered by means of a chest of drawers filled with large nails drawn out progressively like steps, from the top of which he ascended by ropes. In one of his houses a staircase turning on castors was erected, to serve as a crane, for the purpose of raising his carriage into his chamber windows. Windows were frequently converted into doors, and the doors blocked up. At length he conceived an aversion to the presence of servants; and, to obviate their attendance, caused the door leading to his chamber from below to be cut in two, so as to form a bar, over which his domestics were never allowed to pass; but they placed his victuals on a table in the inside, connected by a rope and pulleys with that on which he was sitting, and thus were his victuals conveyed to him.

He was confined in a madhouse on the 2d of January, 1809, where he continued to the day of his death. Lord Ellenborough observed to the jury, that although the inquisition which found Mr. Jervoice a lunatic during the period when the instruments in question were executed, was evidence of his insanity, yet that such evidence was presumptive only, not conclusive; and if they should be of opinion, that when he granted the annuity he had such possession of his intellects as rendered him perfectly aware what he was doing, and in making such a disposition of his property had followed the dictates of his mind when fully possessed of reason, their verdict should be in favour of the annuity; provided, on the contrary, they believed him to have been, during the whole period covered by the inquisition, in a state of decided insanity without any lucid interval, the defendants were entitled to a verdict.—Verdict for plaintiff*.

There is sometimes considerable difficulty in detecting monomania, when the particular subject on which the mind is deluded is not immediately known, or does not happen to be accidentally touched upon. Lord Erskine, when acting as counsel for Hatfield, who shot at the King in Drury-lane Theatre, related the following interesting anecdotes, which had been told him by Lord Mansfield.

"A man of the name of Wood indicted Dr. Monro for keeping him as a prisoner when he was sane. He underwent the most severe examination by the defendant's counsel without exposing his complaint; but Dr. Battye having come upon the bench by me, and having desired me to ask him what was become of the Princess whom he had corresponded with in cherry-juice, he showed in a moment what he was. He answered, that there was nothing at all in that, because, having been (as every body knew) imprisoned in a high tower, and being debarred the use of ink, he had no other means of correspondence but by writing his letters in cherry-juice,

* Law Magazine, No. VII.

and throwing them into the river which surrounded the tower, where the Princess received them in a boat. There existed, of course, no tower, no imprisonment, no writing in cherry-juice, no river, no boat; but the whole the inveterate phantom of a morbid imagination. I immediately (continued Lord Mansfield) directed Dr. Monro to be acquitted; but this man, Wood, being a merchant in Philpot-lane, and having been carried through the city in his way to the mad-house, indicted Dr. Monro over again, for the trespass and imprisonment in London, knowing that he had lost his cause by speaking of the Princess at Westminster; and such (said Lord Mansfield) is the extraordinary subtlety and cunning of madmen, that when he was cross-examined on the trial in London, as he had successfully been before, in order to expose his madness, all the ingenuity of the bar, and all the authority of the court, could not make him say a single syllable upon that topic, which had put an end to the indictment before, although he still had the same indelible impression upon his mind, as he signified to those who were near him; but, conscious that the delusion had occasioned his defeat at Westminster, he obstinately persisted in holding it back."

And the following may be added, which Lord Erskine related on the same occasion, as having occurred in his own practice. "I well remember that I once examined, for the greater part of a day, an unfortunate gentleman who had indicted a most affectionate brother, together with the keeper of a mad-house at Hoxton, for having imprisoned him as a lunatic; whilst, according to his evidence, he was in his perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact; but, not having the clue, he completely foiled me in every attempt to expose his infirmity. You may believe that I left no means unemployed which long experience dictated; but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of the most wanton and barbarous oppression: at last Dr. Sims came into court, who had been prevented by business from an earlier attendance. From him I soon learned, that the very man whom I had been above an hour examining, and with every possible effort which counsel are so much in the habit of exerting, believed himself to be the Lord and Saviour of mankind; not merely at the time of his confinement, which was alone necessary for my defence, but during the whole time that he had been triumphing over every attempt to surprise him in the concealment of his disease. I then affected to lament the indecency of my ignorant examination, when he expressed his forgiveness, and said, with the utmost gravity and emphasis, in the face of the whole court, 'I am the Christ;' and so the cause ended."

ON THE

POWERS ON WHICH THE FUNCTIONS OF LIFE IN THE MORE PERFECT ANIMALS DEPEND,

AND ON THE

MANNER IN WHICH THEY ARE ASSOCIATED IN THE PRODUCTION OF THEIR MORE COMPLICATED RESULTS.

By A. P. W. Philip, M.D. F.R.S. L. & E. &c.

[From the Philosophical Transactions, with large additions, communicated to the Medical Gazette by the Author.]

In considering the powers of life, I shall in the first place inquire into the seat, the functions, and the nature of each of these powers; and then point out the manner in which they are associated in the production of their more complicated results*.

* The following paper comprehends the results of a task, not of a few months or years, but, with the exception of the time devoted to the more active duties of my profession, of the greater part of not a short life. As far as I can, to render what I have done useful, it is necessary that the various facts should be compared, and thus the inferences they afford ascertained. They are dispersed through so many publications, eleven papers in the Philosophical Transactions, published in the course of twenty years, an Inquiry into the Laws of the Vital Functions, a Treatise on the Influence of Minute Doses of Mercury in restoring the Functions of Health, my Gulstonian Lectures on the more obscure affections of the Brain, &c., that although they are frequently referred to, it has almost always been, more or less, under mistaken views; because the writer, in commenting on one part, has been unacquainted with others with which it is intimately connected, for in so protracted an investigation, few will take the trouble to keep pace with the inquirer.

It will appear from the references in the following paper, how each of the various facts, dispersed through so many publications, has contributed to fill up the great outline of the laws that regulate the animal functions, which has been the object of my labours; and from which the topics of the day have never induced me to swerve. It is evident that this outline must be ascertained before the functions of particular organs can be successfully investigated; all of which, more or less, depend on the general laws of our frame.

The following, I believe, is the first attempt which has been made to ascertain experimentally the seat, the functions, and the nature of all the powers of the more perfect animal, and the various relations they bear to each other, by which

Of the Seat, the Functions, and the Nature of the Powers on which the Phenomena of Life depend.

Of the powers of the living animal, the simplest is that by which the motion of its various members is effected, and which essentially contributes to all its more complicated functions, the contractile power of the muscular fibre, the healthy action of which is not a state of uniform contraction, but of a constant and generally rapid succession of contractions and relaxations, probably the cause of its moderate excitement being (in opposition to the laws which regulate the excitability of the organs of the sensitive powers) followed by no sensible exhaustion of excitability, on which we shall find the most important results depend. Its permanent contraction, we have reason to believe, is always a state of disease. It is followed, unless of very temporary duration, by a sensible exhaustion of excitability*.

Many of the older physiologists supposed that all the powers of the living animal reside in the nervous system. Haller was the first who, in a way that commanded general attention, maintained that the muscular power resides in the muscular fibre itself, and made experiments for the purpose of establishing this opinion.

His conclusions, however, were not generally admitted, and the principle on which the point was argued could lead to no decision. It was as easy to affirm as to deny that the remaining nervous influence is the cause of the power which exists in the detached muscle, for it was impossible to separate from the muscular fibre the minute extremities of the nerves with which it is blended, and to them it was alleged that it owes the power, which for a short time it retains after its separation from the brain, spinal marrow, and larger nerves.

The only conclusive means of determining the question, appeared to be an appeal to such experiments as are capable of directly ascertaining whether the effect of the nervous influence on the muscular fibre be that of maintaining, or analogous to the effects of other stimulants, of exhausting its excitability.

It appears from the 32nd experiment, detailed in my Inquiry into the Laws of the Vital Functions*, that the latter is the case to a degree that leaves little doubt respecting the result†; which was confirmed by other experiments, in which I found in many trials, that when the powers of the nervous system are destroyed by opium or tobacco, the loss of power in the muscles is not proportioned to the degree in which the powers of that system are impaired, but simply to the degree in which their contractions had been excited through it‡; and that the removal of both the brain and spinal marrow, which we shall find are the only organs employed in the formation of the nervous influence, does not in any degree impair the action of the heart and vessels, as long as the healthy state of the blood can be maintained by artificial respiration§.

From the whole of these experiments, it appears that the opinion of Haller is correct, that the power of the muscular fibre is not derived from the nervous system, but resides in that fibre itself; a conclusion which we shall find of no small importance in judging of the nature

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several, and in some functions all of these powers being enabled to cooperate, their more complicated results are effected. In the latter part of the subject, I have found much care required in rendering the language sufficiently explicit; and if in any instance I have failed in this attempt, I hope it will in some degree be ascribed to the very complicated nature of the subject, arising from the great variety of facts on which the conclusions are necessarily founded.

It will be admitted with respect to the conclusions themselves, that the circumstance of the present inquiry embracing the whole of the subject, is in favour of their accuracy; because in that case, and where, as in the present instance, all the parts are intimately connected, few inferences consequently resting on any single position, an error may betray itself in so many ways, that it can hardly escape detection.

In the Treatises above mentioned, the conclusions being founded on many of the experiments to which I shall have occasion to refer in the following paper, it was necessary as far as this is the case, to refer to their results in these Treatises. As the conclusions of the present paper constitute the object I had in view in all I have done on the subject, it is necessary in it to refer to the results of all these experiments, either as essential to, or tending to illustrate, those conclusions.

There is no other branch of medicine in which misstatements find so ready currency as in the less familiar departments of physiology. Thus it is that the subjects which require the most delicate handling are most exposed to rough usage; and, except among those who make them a serious study (which is not easily done amidst the fatigue and anxieties of a laborious profession), involved in inextricable confusion.

* See papers on the Nature of Sleep and Death, published in the Philosophical Transactions for 1833 and 1834, and republished in my treatise On the Nature of Sleep and Death.

* In referring to my Inquiry into the Laws of the Vital Functions, the reference is always to the third edition.

† When two sets of muscles of the same description were exposed to the action of the same artificial stimulant, and one of them at the same time to the effects of the nervous influence, it was found that the excitability of the latter was most rapidly exhausted; and this was sometimes the case to so great a degree, that in one instance the excitability of the muscles exposed to both was exhausted in half the time required for its exhaustion in those exposed to the artificial stimulant alone.

‡ The fourth edition of my Treatise on Fevers and Inflammations.

§ Philosophical Transactions for 1815, and my Inquiry into the Laws of the Vital Functions, Part II.

of the nervous influence, and consequently of other functions of the living animal, beside the function of the muscular fibre.

The powers of the nervous system, properly so called, which cooperate with the muscular fibre in all the more complicated functions, next demand our attention: and it will appear that there is no other branch of physiology in which the generally received opinions have been, and indeed still are, so much at variance with simple matter of fact.

That what in common language is called the nervous system, embraces two distinct sets of organs, is evident; because not only do the functions of the sensorial and nervous organs, properly so called, essentially differ in their nature, but, as we shall find, their localities also are different. Now it has generally been taught that the nervous functions, properly so called, only administer to those of the sensorial power; that they are limited to the conveyance of impressions to and from the sensorial organs, and to the excitement of the muscles of voluntary motion*.

I shall in the first place inquire into the nature of the functions of the nervous system, properly so called, and then endeavour to ascertain to what parts of that system the powers on which those functions depend, belong.

The mere structure of the parts might have led physiologists to suspect that the organs of this system possess other powers than those just enumerated. We find two distinct classes of nerves, to one of which the functions subservient to the sensorial powers evidently belong, and it has never been proved that the other at all partake of these functions. Besides, it had appeared from experiments relating to this second class of nerves, although their results were differently reported by different writers, that they must possess functions of a wholly different nature.

Such were the circumstances which called my attention to this, as it were, superadded class of nerves; and I think it will appear from the facts I am about to adduce, both what are their functions, which we shall find much more complicated than those of the former class, and why the results of the experiments just referred to have been so differently reported.

The most evident peculiarity of structure relating to these nerves is, that while all the former class proceed either from the brain or spinal marrow, directly to the parts they influence, or which influence them, they either enter or send branches which enter a chain of protuberances called ganglions, from which nerves are sent to the parts influenced by them. Hence they are termed ganglionic nerves, a term, however, which has not been employed in a very strict sense; because, besides the ganglions just mentioned, which receive nerves from different parts of the brain and spinal marrow, there are other protuberances also termed ganglions, which are formed on particular nerves, but which appear to have no relation to any nervous filaments but those of the particular nerve to which they belong. It is therefore necessary that I should define the sense in which I use the terms ganglion and ganglionic nerve. By ganglion, I mean a nervous protuberance which receives nerves from different sources; and by ganglionic nerve, a nerve which either enters or sends branches to such ganglions, or proceeds from them, whether it have or have not, any such protuberance belonging to itself. It may be stated, however, that there is reason to believe that all nerves having such protuberances contribute towards the formation of the ganglions in the sense in which I use the term*.

One of the most evident peculiarities of the ganglionic nerves, in the sense in which I use the term, is, that while the cerebral and spinal nerves supply the sensitive organs and the muscles of voluntary motion, the ganglionic nerves supply the muscles of involuntary motion and the other vital organs.

Haller, finding that the heart cannot be influenced through its nerves in the same way as a muscle of voluntary motion, was led to the conclusion that the former cannot be directly influenced through the nerves. But M. Le Gallois has shown that he was deceived in this inference, the heart being immediately subject to the influence of the spinal marrow; and the latter author further inferred from his experiments, that the spinal marrow is not only capable of directly influencing the heart through its nerves, but that, through the same channel, it bestows on both the heart and blood-vessels all their powers; an inference refuted both by experiments already referred to, and others, an account of which appeared in the Philosophical Transactions for 1815, and has since been republished in my Inquiry into the Laws of the Vital Functions; and some of which were at the

* See in the Report of the British Association for the Advancement of Science for 1833 a paper by Dr. Henry, of Manchester; and a Dissertation on the state of Medical Science from the termination of the 18th century to the present time, by Dr. Allison, Professor of the Institutes of Medicine in the University of Edinburgh, in the Cyclopædia of Practical Medicine, published in 1834.

* See a paper on the function of the nervous system, in the Philosophical Transactions for 1829, which was republished in my treatise On the Nature of Sleep and Death.

request of the Royal Society, repeated with the same results by Mr. Clift; Mr. Clift's confirmation of them being published in the same volume of the Transactions.

The circumstance of the brain and spinal marrow only, as we shall find, influencing the heart under peculiar circumstances, is probably the cause of the fact ascertained by Haller, that it cannot be excited through its nerves in the same way as a muscle of voluntary motion, an observation which applies to all muscles of involuntary motion, a want of attention to which has misled some physiologists*.

From the whole of the experiments which have been referred to, it appears, on the one hand, that neither the brain nor spinal marrow bestows any power on the heart or vessels; but, on the other, that each of the former organs is equally capable of directly influencing both, (the vessels, even to their utmost extremities,) and that not only by exciting their powers, but also by impairing, and even wholly destroying them, according to the nature and power of the agent operating on the brain or spinal marrow†; although in their usual functions the heart and vessels, like the other muscles of involuntary motion, obey neither of these organs, but agents peculiar to themselves‡.

Thus it appeared that the ganglionic, like the cerebral and spinal nerves of motion, may administer towards the contraction of the muscular fibre, unless, what I conceive to be more probably the case, although not yet ascertained, branches of the latter nerves are bound up in the same sheath with the ganglionic nerves, as we shall find there is reason to believe is the case with respect to the nerves of sensation*. Physiology has been much indebted to the experiments of Sir Charles Bell, M. Magendie, and Mr. Mayo, from which it appears that the nerves of motion and those of sensation, although often bound up in the same sheath, are distinct nerves, having different origins.

What are the functions which are peculiar to the ganglionic nerves, in the sense in which I use that term?

This question is answered respecting one of the most important of the vital functions, the process of secretion, in papers published in the Philosophical Transactions for 1815 and 1822, and republished in the last edition of my Inquiry into the Laws of the Vital Functions.

It appears from the experiments detailed in those papers, that when part of the eighth pair of nerves in their passage along the neck is removed, or these nerves are divided, and one end of either portion is raised from its place, the secretion of gastric juice soon begins to fail in its properties; and if the animal survives for a certain time, the contents of the stomach are found not only undigested, but quite dry, proving that there had been no secretion from it whatever for some time.

From these experiments we also learn how it has happened that such various accounts of the effects in the stomach of dividing the eighth pair of nerves is given by different experimentalists; because it was found that digestion was more or less completely interrupted in proportion as the divided ends of the nerves were kept at a considerable distance from each other. Even when the distance was a quarter of an inch, provided the divided ends were no otherwise displaced than in consequence of the retraction of the nerve on its division, digestion, although more or less deranged, was not interrupted, a subject to which I shall have occasion to recur†. Now as this was a point which never particularly demanded attention, accident must always have more or less influenced the result.

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* See my reply to MM. Breschet and Milne-Edwards, in the Philosophical Transactions for 1829, entitled, "Some Observations relating to the Function of Digestion."

† It appears, from direct experiment, that both the nervous and muscular powers may be instantly destroyed by suddenly crushing either the brain or spinal marrow. When the experiments on which these positions are founded were first made known to Mr. Andrew Knight, the President of the Horticultural Society, so celebrated for his discoveries in vegetable physiology, partly from motives of humanity and partly to render the flesh of the animals immediately fit for the table, he adopted the practice of killing all the smaller animals by suddenly crushing the brain. Thus, by the instant destruction of the contractile power of the muscles, all stiffening after death is prevented, the flesh at once being rendered permanently tender; a striking proof of the influence of the nervous over the muscular system; and in the account of his mode of killing the animals, published by Mr. Knight, in the newspapers of his neighbourhood, he states that the flesh is thus rendered both more tender and of a better flavour than can be done by the usual method of keeping the dead animal.

‡ See two papers published in the Philosophical Transactions for 1815, and republished in my Inquiry into the Laws of the Vital Functions.

* It appears from the anatomical researches of Mr. Mayo (Outlines of Human Physiology, fourth edition, page 260,) that nerves of motion are bound up in the same sheath with ganglionic nerves. I was not aware that this fact had been ascertained by direct observation at the time the passage to which this note belongs was printed in the Philosophical Transactions. My opinion, as there expressed, was an inference from the general laws of the animal economy.

† In some organs, when the nervous influence is to a certain degree impaired, while the properties of the secreted fluid are altered its quantity is increased, when the nervous power is impaired to a greater degree, the quantity also is impaired; and at length the secreting power wholly fails, no discharge whatever from the secreting surface taking place. The results of the experiments here referred to are well illustrated by some of

But secretion is not the only vital function that is influenced by the division and separation of the divided ends of the eighth pair of nerves in the neck. It appears from experiments detailed in a paper published in the Philosophical Transactions for 1827, and republished in my treatise On the Nature of Sleep and Death, that, under such circumstances, all the assimilating functions are so deranged that in many parts of the lungs, in the space of fifteen or twenty hours, not a vestige of their healthy structure remains.

Such, it appears, are the effects on the stomach and lungs of depriving them of a considerable portion of the influence of the brain. They are organs well adapted for such observations. In the stomach we have certain means of judging of any considerable deviation in the process of secretion; and from the peculiar structure of the lungs, they are well adapted for observations on changes of structure. That the effects are proportioned to the degree in which the influence of the brain is withdrawn, appears from comparing those of dividing and separating the divided ends of one or both nerves.

It is not, however, to the brain alone that similar observations apply, for it was found that depriving the stomach and lungs of the influence of the spinal marrow is attended with the same effects. When the lumbar portion of this organ was destroyed, the functions of the stomach and lungs, and the structure of the latter, were as much impaired as by the division and separation of the divided ends of one of the eighth pair of nerves; and when the lower half of the spinal marrow was destroyed, as much, as by the division and separation of the divided ends of both those nerves *.

It thus appears that the powers on which the secreting and assimilating functions depend reside in the brain and spinal marrow, and equally in these organs; nor does either of them receive their impressions or act through the other in influencing the vital organs, as the brain is found to do through the spinal marrow with respect to many of its impressions, and in influencing many of the muscles of voluntary motion; the heart and vessels in every part being equally influenced by agents acting either on the brain or spinal marrow, when the other has been removed, as while both, with all their connexions, remain. And the complete division of the spinal marrow at its middle having no effect in impeding the functions of either the stomach or lungs except in a hardly perceptible degree, proportioned to the small part of that organ necessarily destroyed in its division, the lower contributing to the functions of both the stomach and lungs precisely as it did before its separation from the upper half *. The sensitive functions cease in all parts below the division, because in these functions the spinal marrow only transmits the influence of the brain †.

The question which next presents itself is, how far are the brain and spinal marrow assisted in the foregoing functions by the nerves, ganglions, and plexuses?

In a paper, published in the Philosophical Transactions for 1833, and republished in my treatise On the Nature of Sleep and Death, I have entered into this question at great length, where such observations and experiments will be found, as far as I am capable of judging, as render the following inferences unavoidable. That the nerves, ganglions, and plexuses, in no degree contribute to the formation of the nervous influence; the spinal and cerebral nerves being merely the means of conveying the influence of the parts of the brain and spinal marrow from which they proceed, and of conveying to these organs the influence of impressions made on their extremities; while the ganglions and plexuses are only the means of combining the influence of all parts of the brain and spinal marrow, through all parts of which the organs of the nervous power properly so called, are distributed; the nerves proceeding from the ganglions and plexuses being the means of conveying this combined influence to the muscles of involuntary motion and the other vital organs.

The question here arises, For what purpose is the influence of every part of the brain and spinal marrow thus combined to be bestowed on these organs?

This question is answered by the experiments just referred to, which prove that the influence of every part of the brain and spinal marrow is necessary to the due performance of the functions of secretion and assimilation; and by other facts to which I shall have occasion to refer, which prove the necessity of the muscles of involuntary motion being under the control of the same power, on which these functions depend.

All of them, as we have just seen, fail when any considerable part of the influence either of the brain or spinal marrow is withdrawn, the failure of function being proportioned to the degree in which

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the symptoms of the disease called the Asiatic cholera, which appears, from what I have said in a pamphlet on that disease, to be the effect of the continued operation of a cause, impairing alone the nervous powers, properly so called.

* See my Inquiry into the Laws of the Vital Functions, Part II.

* Inquiry into the Laws of the Vital Functions, Part II. Exp. 62.

† Ibid, Part II.

the influence of either is withdrawn, proving that the influence of every part of them is essential to the due performance of those functions *.

Important and extensive as these functions are, there is still another, hardly less so, dependent on the powers of the nervous system properly so called. Sir Benjamin Brodie † proved by direct experiment many years ago, that animal temperature is under the influence of the nervous system, and various observations evince that a debilitated state of the brain is accompanied with a diminished temperature.

I made many experiments on this subject, detailed in my Inquiry into the Laws of the Vital Functions, from which it appears that in this, as in all the other vital functions, the spinal marrow shares with the brain. If the power of either organ be impaired, the temperature sinks in precisely the same proportion as the secretions are deranged. A particular organ may be deranged by preventing its due supply of nervous influence, and there may be no general diminution of temperature. The due nervous influence is prevented reaching the particular organ, but there is no diminution of the power of the brain or spinal marrow. When, on the other hand, the power of either of these organs is impaired, there is an immediate diminution of temperature,—a proof that the maintenance of animal temperature is effected through the medium of the ganglionic nerves, they alone conveying the combined influence of both the brain and spinal marrow. By this means we can by easy experiments ascertain through which class of nerves any function is maintained, and consequently its organs supplied, in cases where the parts are too minute for the labours of the anatomist. It was thus that it was ascertained that the vessels, even to their minutest extremities, are supplied by ganglionic nerves.

When the lower half of the spinal marrow was destroyed the animal shivered, and would probably soon have died of cold, if it had not been kept in a high temperature; and even when the lumbar portion alone was destroyed, a considerable but less diminution of temperature ensued ‡.

Thus it appears, from the whole of the facts which have been referred to, that on an influence derived from the brain and spinal marrow, and not from any part, but from the whole of these organs, the secreting and more immediately assimilating functions and the maintenance of animal temperature depend. This influence, therefore, performs a still more important part in the vital than in the sensitive functions. In the latter we find it acting only a subordinate part; while in the former it must be regarded as the great agent, to which all others employed are subservient.

Has the nervous influence any immediate dependence on any of the other powers of the animal frame?

The muscular, we have seen, has no immediate dependence on the nervous power, the only power on which its immediate dependence can be supposed. In like manner the sensorial is the only power on which any immediate dependence of the nervous power can be supposed.

I made an extensive set of experiments, detailed in my Inquiry into the Laws of the Vital Functions, to which I shall soon have occasion to refer more particularly, from which it appears that all the functions in which the nervous power, properly so called, is employed, survive the removal of the sensorial power, with the exception, of course, of those in which that power is associated with it. After the removal of the sensorial power the nervous influence still retains all its properties. It is still capable of exciting the muscles both of voluntary and involuntary motion, of, for a short space of time, forming the secreted fluids, performing the various functions of assimilation, so far as to preserve the structure of the parts where it would otherwise have been impaired, and, to a certain degree, of maintaining animal temperature. The nervous, like the muscular power, therefore, is an independent power, having its seat in its own organs, and having no other dependence on the other powers of the living animal than for the due structure of those organs.

Such are the powers of the nervous and muscular systems of the more perfect animals, and the seat and functions of these powers.

They possess, however, two other sources of power, for the sensorial power and the powers of the living blood have no immediate dependence on either of the former powers, or on each other.

That the only dependence of the sensorial power is for the maintenance of its organs, is evident on the most cursory review of the animal economy. The nature of the functions of that power alone

* See papers which appeared in the Philosophical Transactions for 1815 and 1827, and my Inquiry into the Laws of the Vital Functions, Part II. It appears from what is said in the third part of the third edition of my Inquiry into the Laws of the Vital Functions, that a successful practice in diseases of the spinal marrow was suggested by this fact.

† See the Philosophical Transactions for 1812 and 1814.

‡ Inquiry into the Laws of the Vital Functions, Part II.

evinces that the living animal possesses no others from which it can be derived; and that the powers of living blood have no direct dependence on its other powers, is proved by the fact, that the blood retains its vital properties after it is separated from the body *.

With respect to the locality of the latter powers, the powers of the living blood, it appears from the fact just stated, existing in itself, must be coextensive with the functions of secretion and assimilation. At first view it would appear that the functions of the sensorial power, like those of the living blood, pervade every part of the system; the power of sensation seems to pervade the whole frame. On observing the phenomena with more care, however, we find the seat of the sensorial power confined to a small space, when we compare it with that of the nervous power properly so called, the organs of which, we have seen, pervade the whole of the brain and spinal marrow.

The nerves of sensation, in which are included, of course, the nerves of the external senses, and the immediate organs of the sensorial powers, are not parts of the same organ, but distinct parts, having different localities and performing functions of a wholly different nature; that is, the sensorium does not pervade the whole system, but belongs to particular parts. To what parts has never been correctly ascertained, but we know that in man they are confined to certain parts of the brain, with little if any participation by the spinal marrow; although in some of the inferior animals the spinal marrow largely partakes of them, a proof that the sensorium is not, as some have supposed, confined to a physical point, but is of a considerable extent.

Our sensations are referred to certain parts of the body by experience alone. Hence the well-known facts that infants are not aware of the part of the body in which the cause of any sensation originates; and when a limb has been lost, at whatever part the separation is made, we continue to refer to the lost part sensations excited by causes affecting the nerves of the stump.

The function of the nerves of sensation has relation to the sensorial organs alone. The influence they convey is the means by which the sensorium is impressed by distant parts, and such is their only function.

The more perfect animals, then, possess four distinct powers, having no direct dependence on each other, but each we shall find indirectly dependent on the other three, namely, for the maintenance of its organs.

I am now to inquire how far we can advance in determining the nature of these powers, how far they are peculiar to the living animal, or the same which operate in other parts of nature.

We are in the habit of regarding life as a power of peculiar mystery, but do we find any other principle of action less mysterious? It is not the principle but its properties which are the objects of our senses. A knowledge of the former is not merely beyond the limits, but the nature of our minds. Do we know more of the principle of electricity or gravitation than of life, or is there more uncertainty in noting the property of resistance to fermentation and congelation without any sensible peculiarity in the substances possessed of this property, than that of weight or light? It is not that the nature of life is more obscure than that of any other principle of action, all are equally so, but that its phenomena, being more varied and bearing less resemblance to those of other principles than these bear to each other, are less familiar objects of contemplation.

The subject thus appears invested with an obscurity which does not belong to it, and the perplexity has been increased by vain attempts to remove it; attempts on principles having no relation to the laws by which the phenomena of life are regulated. What possible relation can the laws of mechanics, or any other principle which operates in the inanimate world, bear to the phenomena of life properly so called? It is as much a distinct principle as any of those which operate in that world, and the same method which leads to a knowledge of other sciences must guide us here. There are no means but a study of its phenomena by which we can attain a knowledge of life, that is, of its properties, the only knowledge we can attain of any principle of action. But if our object be to attain a correct knowledge of it, we must first determine with accuracy what are the phenomena of life; for, in the complicated functions of the living animal, it requires not a little patience, labour, and circumspection, to distinguish what part depends on vital powers properly so called, and what on a modification of the powers of inanimate nature. Even the most cursory view must convince us that many of the functions of the living animal partake of the latter powers.

Respiration is performed, that is, the air is drawn into and expelled from the lungs, by means which act on the same principle as the bellows. The blood in the circulation moves on the same principle as the

* See Mr. Hunter's experiments on the Blood, and the experiments detailed in the last chapter of the second part of my Inquiry into the Laws of the Vital Functions.

water in a set of water-pipes. It obeys a propelling force, and is subjected to the same laws of gravitation. The motion of our limbs is effected by the same mechanical laws by which bodies are put in motion in the external world. Here, as in inanimate nature, velocity can only be obtained by the sacrifice of power. Similar observations apply to the various processes of secretion and assimilation. We can trace in these processes the same chemical laws which obtain in the laboratory of the chemist; but there is at the same time, in all the foregoing functions, something more in operation, analogous to which we find nothing in inanimate nature.

The force, indeed, by which the air is drawn in and expelled in respiration, operates on the same principle as in the bellows; but the powers by which the machinery is worked are the contractile power of the muscular fibre, and the powers of the nervous system, by which the stimulus which excites it is both prepared and applied. The motion of the blood depends on the same principle as that of the water in its pipes, but it is the contractility of the muscular fibre which supplies the moving power. The same observation applies to the motion of the various members of our body.

In like manner, in the processes which maintain the organs of all these functions, and effect the separation of those parts of them which have become useless, and therefore noxious, while we trace the same chemical laws which operate in other parts of nature, we can perceive that they are constantly modified by the powers peculiar to the living animal; for it is not only impossible, by any chemical arrangement, to produce the same results in inanimate nature, but, even by the principles which regulate its phenomena, to trace all the steps by which they are effected. We can neither, for example, imitate the process by which the temperature of living blood is raised above that of the surrounding medium, nor, on the principles of the chemistry of inanimate nature, trace all its steps. No position can be more erroneous than that the chemical processes of the living animal depend alone on the same laws with those of inanimate nature. The properties of life are as peculiarly its own as the properties of gravitation.

I am now to attempt to draw the line of distinction between the powers which the living animal possesses in common with inanimate nature, and those peculiar to itself.

With respect to its mere mechanical powers, to which I have just had occasion to refer, there can be but one opinion, that they are powers common to the living animal and inanimate nature; but with respect to the powers we have been more particularly considering, all of which appear, at first view, to be powers peculiar to the former, the question is not so easily answered. Until it is answered, however, it is evident that we cannot draw the line which correctly separates the phenomena of life from those which result from other principles of action; a line essential to an accurate view of the properties, that is, to a knowledge, of that principle.

The question which I am here to consider, then, is, how far are the sensorial, nervous, and muscular powers, and the powers of living blood, peculiar to the living animal, or possessed by it in common with inanimate nature?

It requires but little consideration to answer the question respecting the sensorial and muscular powers, and the powers peculiar to the living blood. Where do we find, in inanimate nature, a power which can be mistaken for any of them? But even the most cursory review of the functions, which, it appears from the experiments above referred to, are those of the nervous power properly so called, makes us pause. That the oxygen and carbon of the blood combine by the same agency as in the laboratory of the chemist, is a position too probable to be hastily dismissed; and if such be the case, to what other functions of the nervous influence will the same observation apply?

The following, it appears from experiments above referred to, comprehend the nervous functions properly so called:—

1. The excitement of the muscles of voluntary motion in all their functions.
2. The excitement of the muscles of involuntary motion in some of their functions.
3. The maintenance of the processes on which animal temperature depends.
4. The formation of the various secreted fluids. And
5. The more immediate processes of assimilation by which the structure of our various organs is both effected and maintained.

Of these functions, the excitement of the muscles alone is the only one which may be supposed to be the effect of either a chemical or mechanical agent.

In all the healthy functions of life, however, in which the muscular power is employed, the stimulus which excites it, if we except the mere power of distension, appears to be of the former description. Even those stimulants which maintain the functions of the alimentary canal, which, remotely depending on the stimulus of the food, may at first view be supposed to be the effect of a mechanical agent, appear to be wholly of a chemical nature. The

ingesta will not excite a secretion of gastric juice unless they possess chemical properties of a certain description, and the muscular coat of the stomach is not duly excited unless the food has been converted into a healthy chyme, the formation of which, it appears from direct experiments, depends on the healthy state of the influence supplied by the brain and spinal marrow*. In like manner, the healthy action of the intestines, as appears from a thousand observations, can only be maintained when their healthy stimulant has been duly prepared by the chemical processes which take place in the duodenum; which also depend on the influence supplied by the brain and spinal marrow. It is evident that all the other functions just enumerated are of a chemical nature. It thus appears that all the nervous functions are chemical processes, and consequently that there may be an expectation of finding an agent in inanimate nature capable of them.

It was found that in proportion as the nervous influence, properly so called, is withdrawn, all these processes fail. It is evident, therefore, that on this influence the changes observed depend. Whatever, therefore, that influence may be, all its functions, in their general nature, are identical with the effects of the chemical agent, whatever that agent may be, which operates in inanimate nature. This step, therefore, appeared to be gained. Further reasoning, however, was unnecessary, because it was not difficult to submit the question to the test of direct experiment.

I was thus led to consider what power of inanimate nature it was most probable might be successfully substituted for the nervous influence.

An important point had been ascertained. It had been found that of all the powers of inanimate nature, voltaic electricity is most capable of the excitement of the muscular fibre, that is, of one of the functions of the nervous influence. This, indeed, went but a short way towards establishing the identity of the two powers, so many other stimulants being capable of exciting that fibre. It is not to be overlooked, however, that feeble as this argument is towards proving the identity of the nervous influence and voltaic electricity, it is powerful respecting the general nature of that influence; because, on the supposition of the nervous influence being a vital power, properly so called, we have here a vital power possessing a property in common with a thousand inanimate agents. Is there any unequivocal instance in which any of the properties of a vital principle, properly so called, is not essentially different from those of any of the principles of inanimate nature? On the whole, the property in question was sufficient to suggest the trial how far voltaic electricity is capable of the other functions of the nervous influence.

No hope of success, of course, could be entertained, unless the artificial agent were employed under the same circumstances under which the nervous influence operates; that is, while the structure of the organs is entire, and their vital properties unimpaired.

Under such circumstances, I substituted it for the nervous influence in the various functions of secretion and assimilation, with success. It was admitted by those who witnessed the results, that these functions were as effectually performed by it, as by that influence itself; and the experiments were afterwards publicly repeated both in London* and Paris†; in the latter, on a great variety of animals, and in both instances with the same results. In the first of my papers published in the Philosophical Transactions for 1829, entitled, "Some Observations relating to the Function of Digestion," several circumstances are enumerated which it is necessary to keep in view in conducting such experiments; a want of attention to which has involved the subject in much confusion.

Only one of the functions of the nervous influence now remained which had not been effected by voltaic electricity—the process by which animal tmeperature is maintained. For the purpose of determining how far it is capable of this function, it was judged the most satisfactory means to expose the living blood to its effects, both in its arterial and venous state. If voltaic electricity operate on the same principle as the nervous influence, it will raise the temperature of the former, but not of the latter, which has already undergone the operation of that influence. Such was

* Philosophical Transactions for 1815 and 1822, and Inquiry into the Laws of the Vital Functions, Part II. In an animal which has survived the division and separation of the divided ends of the eighth pair of nerves till the contents of the stomach, from the failure of nervous influence, have become quite dry, however much distended with food it may be (the circumstances under which the greatest mechanical stimulus is applied to the muscular fibres of the stomach), not even the slightest degree of its healthy action is excited, no part of the undigested food being propelled into the duodenum.

* Philosophical Transactions for 1822. The Journal of the Royal Institution of London for 1822. See also the London Medical and Physical Journal for May, 1820, vol. xliii. p. 385.

† De l'Influence du Système Nerveux sur la Digestion Stomachale; par MM. Breschet, D.M.P. Chéf de Travaux Anatomiques de la Faculté de Médecine de Paris, &c.; H. Milne-Edwards, D.M.P.; et Vavasseur, D.M.P. (Mémoire lu à la Société Philomatique, la 2e Août, 1823.) Extrait des Archives Générales de Médecine, Août, 1823.

found to be the case. The arterial blood immediately rose several degrees on coming into contact with the voltaic wires, but there was no increase of temperature in the venous blood, although, in both instances, the blood was subjected to them as it flowed from the vessels; it having appeared, from previous experiments, that the delay of even a few minutes, although no apparent change had taken place in the blood, and no elastic fluid had been disengaged from it, prevented any rise of temperature; so rapidly do some of the properties of living blood undergo a change after its removal from the vessels *.

Such being the facts, I could no longer doubt that the nervous influence and voltaic electricity are powers of a similar nature, and it appeared to me that this would be most convincingly illustrated, by causing the nervous influence to pass through other conductors than the nerves; because such a fact would, independently of all others, prove that it is not a vital power properly so called, it being acknowledged on all sides that no such power admits of separation from the texture to which it belongs in the living animal.

With this view I made many vain attempts, and hardly escaped the ridicule of my associates for expecting that the nervous influence could exist in any texture but that to which it belongs in the living animal.

In the third edition of my Inquiry into the Laws of the Vital Functions, the reader will find the circumstances detailed which led to the successful experiment, the result of which was publicly confirmed both in London and Paris; and those who in the first instance ridiculed my expectations, joined me in stating that such is the fact.

The cause of failure in my first experiments on this subject, was the circumstance of having made a wrong choice of the nerve on which I operated, which was a nerve of voluntary motion.

It will appear on reflection that this was a wrong choice. Before we can expect that the nervous influence can be made to pass through any other conductor than that to which it belongs in the animal body, there must exist a powerful cause soliciting it to some particular point. In a muscle of voluntary motion there can be no such cause. The nervous influence is not attracted to the muscle, it is sent to it by an act of the sensorium, carried into effect by the powers of the nervous organs, which are subjected to its influence; those organs which, on the one hand, prepare that influence, and those which, on the other, convey it when duly prepared *. The muscle is altogether passive till the influence is applied to it. But the case is wholly different with respect to the seat of many of the functions of the ganglionic system. We know, from direct observation, that in many of them there is a cause continually operating, which solicits the nervous influence to their organs.

In these organs the living blood and nervous influence co-operate in the functions of secretion and assimilation; and it is an acknowledged fact, that when an increased determination of blood to secreting organs takes place, there is, in the same proportion, an increase of their secreted fluids; a result which cannot arrive without a corresponding supply of nervous influence. Thus we know (as, indeed, we had reason to expect) that the presence of the living blood in the secreting organs solicits a proportionable supply of that influence; and thus it was, that whereas, while I operated on the nerves of voluntary motion, my attempts were wholly fruitless, the very first attempt with the ganglionic nerves was crowned with success; nor, since the repetition of the experiments in London and Paris, has the fact been questioned.

If the facts I have stated be correct, we can have little doubt that the nervous influence is of a nature similar to the inanimate agent which was substituted for it; for to say nothing of the circumstance of the nervous influence being capable of existing in a texture different from that to which it belongs in the living animal, we cannot suppose that there are two distinct powers, the one of which is capable of all the effects of the other; or I would rather say, that such a supposition amounts to a contradiction in terms, because as it is acknowledged that we know nothing of any principle of action but by its properties, it necessarily follows, that by these alone it can be distinguished.

In discussing the nature of the nervous influence, too much has been ascribed to electric tests, which are referred to as if they possessed a power equal to that of chemical tests. A correct chemical test will give evidence of what we are in quest of under all circumstances; and is therefore capable, in all instances, of detecting its presence, and consequently its absence also. This arises from there being but one counteracting power, that of affinity. If the affinity be stronger in the test than in any other substance, the effect of all other affinities is destroyed. We possess no such electric test, because here there may be other counteracting causes beside the

* See the second part of my Inquiry into the Laws of the Vital Functions, Experiments 80, 81, 82, 83, 84, and 85.

* See the second of my papers in the Philosophical Transactions for 1829.

power of affinity—opposing currents, for example. Besides, we know that the properties of electricity are so modified by the powers of life, as greatly to interfere with its relations to our tests. The electricity of the torpedo and other electric animals does not affect the common electrometer, yet no one has doubted its identity with the electricity of inanimate nature.

Although electric tests, therefore, give evidence of the presence of electricity, we cannot by their means prove its absence; a fact with which we should not have been acquainted, were it not, under certain circumstances, possible to prove the presence of electricity without their aid; that is, the presence of electricity may under certain circumstances be proved, where it is not indicated by any of the properties generally admitted to be peculiar to it.

Suppose it were said, for example, that we cannot admit that electricity is the agent in the combination of oxygen and carbon, because there is no test by which its presence can be detected; the reply of Dr. Faraday, I conceive, would be—we cannot at present, whatever we may do hereafter, make the electricity employed in effecting this combination evident to any of our tests; but I consider its presence as a necessary inference, because I have adduced facts which prove, either that electricity is the agent in such combinations, or that nature here deviates from the simplicity observed in all her other works. Either electricity is the agent in the combination in question, or there are two kinds of chemical affinity.

Under such circumstances, can any other reply avail except either disproving the facts, or pointing out the fallacy of the inference?

What I have done is strikingly illustrated by the late investigations of Dr. Faraday. It is more than twenty years since I found that voltaic electricity is capable of all the functions of the nervous influence; it now appears from the facts, on which he has founded his doctrine of electro-chemical equivalents, that electricity is the agent in all chemical processes*. According to the inferences of Dr. Faraday, therefore, the experiments, which prove that the nervous influence is the agent in the functions we have been considering, all of which we have seen are chemical processes, are sufficient to prove its electric nature; and we are now also, on the other hand, furnished with direct proof that the brain is capable of collecting and applying, even according to the dictates of the will, the electric power.

Dr. Davy, in his last paper on the Torpedo*, observes, that "when the brain has been divided longitudinally, the fish has continued to give shocks †; when the brain has been entirely extracted, the fish instantly lost this power, though the muscles generally continued to act powerfully;" from which it appears that the electric power is not like the muscular, independent of the brain, but, on the contrary, immediately depending on it; proving that in this, as in all the other nervous functions, as appears from the facts stated in a paper which the Royal Society did me the honour to publish in 1833, and which was republished in my Inquiry into the Nature of Sleep and Death, the nerves are merely the passive, the brain one of the active, parts of the nervous system ‡.

In the foregoing positions we here find, as in other similar instances, that when truth is once arrived at, other facts, beside those which led to it, arise (and still others will present themselves as we proceed) to give it their aid.

Dr. Davy made no experiments to determine how far the spinal marrow, the only other part of the nervous system concerned in the formation of the nervous influence, partakes of the function in question. Were we to reason from the analogy afforded by all the other nervous functions properly so called, we should expect to find the spinal marrow sharing it equally with the brain. It is not unlikely that the removal either of the brain or spinal marrow would destroy this function, as is found to be the case with respect to the more complicated functions properly termed nervous—a point which can only be determined by an appeal to direct ex-

* Dr. Faraday's papers in the Philosophical Transactions for 1832, 1833, 1834, and 1835.

* Philosophical Transactions for 1834.

† A fact analogous to the division of the spinal marrow leaving unimpaired its influence on the secreting and assimilating organs.

‡ The electric organs in the animals called electric are either the means of both collecting and applying the electric power, or of applying it only. As it appears from the experiment of Dr. Davy, referred to in the text, that the brain is essential to the electric function, it follows that this organ either itself supplies the electric power, or enables the electric organs to perform this office. That the former is the case, and consequently that the electric organs are only the means of the application of the electric power, appears from our finding from direct experiment that all the other nervous functions of the brain, properly so called, can be performed by the electric power supplied by other means, and that in all the nervous functions, the nerves (which so copiously enter into the composition of the electric organs, the great supply of nerves being proportioned to the intensity of the electricity required for the function of these organs) are only the means of conveying the influence supplied by the brain or spinal marrow.

periment; or, like the excitement of the muscles, it may belong to either organ separately, or it may, being a function of volition, belong to the brain alone.

In addition to the foregoing statements I may refer to the success which has attended the employment of voltaic electricity in those diseases which depend on a deficient supply of nervous influence*.

That we may have a clear view of the line of distinction between the sensorial and nervous powers, a more particular consideration of the former is necessary.

The following points, we have seen, are made out from the phenomena of every day's experience, that the organs of the sensorial power and the nerves of sensation, in which, of course, are included the nerves of the organs of the external senses, are distinct organs; the former being the immediate organs of those powers, the latter the organs which excite them.

We have just seen reason to believe that the influence conveyed by the nerves which excite the muscles, and maintain the secreting and assimilating functions and the due temperature of the animal body, is a power which operates in inanimate nature; because, on the one hand, we have found such a power capable of all the functions of the nervous influence, properly so called; and, on the other, that this influence is capable of existing in other textures than those to which it belongs in the living animal, proving that it is not a vital power, properly so called.

Are the properties of the influence conveyed by the nerves of sensation the same with those of any of the powers of inanimate nature, or can this influence exist in any texture but that to which it belongs in the living animal?

It is enough to say that its only property is that by which it is enabled to cooperate with the immediate organs of the sensorial power. To such a property we not only find that there is nothing analogous in any of the properties of inanimate nature; but, as will more fully appear from what I am about to say, that the organs of the sensorial power are, in their healthy functions, unapproachable by any of its agents: it is therefore perhaps unnecessary to add, that we know of no texture in which the influence conveyed by the nerves of sensation can be supposed to exist, but that to which it belongs in the living animal.

The nerves of sensation, therefore, belong to the sensorial, not to the nervous power. They convey an influence of a wholly different nature from that conveyed by the nerves of the latter power; and the only analogy which can be traced between their function and the operations of inanimate nature is, that it is excited by impressions received from the agents of the external world; to which we are indebted for all our knowledge of that world. The action of the immediate organs of the sensorial power, we have seen, being thus excited by one vital part acting on another, and by its vital properties alone, all analogy with the operations of inanimate nature here disappears.

While the other functions of the living animal are the results of inanimate agents acting on living parts, or living parts on them, in the sensorial functions we see the effects of vital parts acting on each other, and that by their vital properties alone. Hence the analogy between the former and the operations of inanimate nature, and, with the exception just pointed out, the total loss of all such analogy in the latter.

Whence is it possible to conceive that such analogy can arise, except from the operation of some of the agents of the inanimate world? As no analogy can exist where there is not some property in common, and where any property is observed, there the agent to which it belongs must operate, it necessarily follows that in all cases where any analogy can be traced between the functions of life and the operations of inanimate nature, there some of the agents of the latter must operate. When the phenomena of the living animal are carefully compared with the preceding facts, it will be found that in every instance in which any analogy between its functions and the operations of inanimate nature is observed, the interference of such an agent may be detected.

We have now considered, individually, the various powers of the more perfect living animal. We have found in it, beside the mechanical powers which, it will be admitted on all hands, it evidently possesses in common with inanimate nature, four distinct powers; three of them vital powers, properly so called—that is, powers having properties essentially different from those of the agents which operate in inanimate nature. In the fourth alone we recognize one of these agents; for we find it can exist in other textures than those to which it belongs in the living animal, and that we can substitute for it one of the powers of inanimate nature, without deranging the functions of life.

As it is admitted that the living animal partakes of the mechanical, should it surprise us to find that it also partakes of the

* See my paper in the Philosophical Transactions for 1817, and Inquiry into the Laws of the Vital Functions, Part III., and my Treatise on Indigestion, 7th edition.

chemical powers of inanimate nature? It appears from the experiments of Dr. Faraday, above referred to, that it is only as it partakes of the electric, that it can partake of the latter powers.

All the foregoing powers are employed, although in a very different way, in the construction of two systems in a great degree distinct; the end of the one being the maintenance of our bodies, of the other our intercourse with the world which surrounds us.

In the remaining part of this paper, I am to consider the various relations those powers bear to each other in the maintenance of the foregoing systems; and the way in which these systems themselves are so related, as to form the animal body into a whole, in which no part can be affected without tending more or less to influence every other.

This part will appear in the next number of the GAZETTE.

SUCCESSFUL LABOUR,

WHERE THE PELVIS WAS GREATLY DEFORMED AND CONTRACTED.

To the Editor of the Medical Gazette.

SIR,

THE accompanying case will, I think, prove interesting to your readers.

Your obedient servant,

GEO. S. LILBURN, M.D.

24, Harley-street, March 10, 1837.

The wife of a respectable engraver was recommended, by a celebrated surgeon of this metropolis, to place herself under my care on her approaching confinement with her first child. She is a short woman, and has deformity of the pelvis, from protrusion of the sacrum anteriorly, which could be distinctly ascertained on a common examination per vaginam.

On the 4th April, 1834, the labour pains began, and lasted fifteen hours; during which time I bled her freely. When the child was born, its head was considerably elongated, the parietal bones overlapping, and the animation suspended: by bleeding it from the umbilicus, inflating the lungs, using the hot-bath, and external stimuli, it cried after little more than three quarters of an hour. The mother suckled her infant, and had not one unfavourable symptom during her convalescence.

She again became pregnant, and applied to me to attend her. The labour pains began on the 23d June, 1836. On examination, I found the deformity had considerably increased, the antero-posterior diameter of the pelvis measuring certainly *less than three inches.* She had neglected to send for me until the membranes were ruptured, and the child's head was fixed at the brim of the pelvis. The pains were severe, and having remained with her more than six hours with no advancement, and the head so firmly impacted that I feared rupture of the uterus, I determined, if no advancement took place within an hour, to perform craniotomy. I had bled her, and in some degree produced relaxation of the os uteri and vagina. After waiting the full time, I sent to my friend Mr. Wooldridge, of Jermyn-Street, to assist me in the operation, having experienced his valuable services on previous occasions. We had met but a very short time when the patient gave a most piercing shriek, and I dreaded what might have taken place (rupture of the uterus). To my great surprise and satisfaction, however, I found the child's head in the cavity of the pelvis, and in half an hour it was in the world—the animation suspended. We moulded its head (which was sadly mis-shapen), bled it from the umbilicus, inflated the lungs, used the hot-bath, &c. for upwards of an hour and a half before any signs of animation appeared; the child then gasped, the left eye opened, then the left arm twitched, then the left leg; the right side was entirely paralysed, and remained so five hours. I kept the mother upon water-gruel for five days; she suckled her child, and had no unfavourable symptom during convalescence. Both this and her first child are strong, and as fine healthy boys as any in London.

DEATH OF THE FŒTUS,

FROM WINDING OF THE UMBILICAL CORD ROUND THE NECK.

To the Editor of the Medical Gazette.

SIR,

IN the MEDICAL GAZETTE, part the second, session 1836–7, p. 231, is a note from the Editor, desiring to be

favoured with the particulars of the case "where the child was strangled by the umbilical cord," &c. &c.

In consequence of which, I beg to furnish you with a case to the point, and which occurred to me 26th November last, in this town, where I have practised as an accoucheur for more than the last fifty years. On the day above-named, I was requested to attend on a lady, whom I found in labour of her third child, which labour was rather premature, as she did not expect to be confined, by her *own reckoning*, for six weeks. On examination I found the breech presenting, and between the pains I could to a certainty perceive the child move, and therefore alive, the lady herself noticing that her child was alive, that she felt it strong at the beginning of, and during labour. The os uteri being fully dilated, the child was soon forced down by the pains to the os externum, and there it rested (contrary to my hopes and expectations, the child being so small) for several pains; for I concluded its expulsion would be almost immediate, as one of the nates, or ischia, had protruded a little through the os externum: this circumstance was easily accounted for after the birth of the child, as the umbilical cord was tightly wound round its neck many times, which, in my opinion, retarded the expulsion of the child, and was the direct cause of its death. After I had separated the child from the placenta, I found it loose in the vagina. In my long practice I do not recollect such a clear case of strangulation at the birth, from the umbilical cord being twisted round the child's neck, as I have detailed to you; nor should I have taken notice of this one, had I not read your note at the foot of Mr. Thompson's case. I recollect pointing out to the husband of the lady, who is a young surgeon, and who was in the room at the child's birth, that the child was dead, and shewed him how the navel-string was wound round the child's neck so tight, and that it was the cause of its death.—I remain,

Your obedient servant,
W. C. Hunt.

Dartmouth, March 6, 1837.

In a subsequent note, Mr. Hunt writes:—

I beg to correct an expression in my letter, sent two days ago. I think the word *strangulation* is misapplied; it ought to be, that the circumvolutions of the umbilical cord round the child's neck, made such a pressure on the vessels of the funis as to stop the circulation of the blood; thereby destroying the child's life. Had the infant ever breathed, then the word *strangled* would have been properly used.

March 8, 1837.

BARK OF THE ROOT OF POMEGRANATE IN TAPE-WORM.

To the Editor of the Medical Gazette.

Sir,

From reading the account in your last number of the extraordinary case of the eighteen tape-worms, I observe the last medicine prescribed was—

Decoct. Granati, 3iii. ad. Oj.,

which brought away three entire worms.

My object in addressing you is to state, that the infusion of the fresh bark of the root of the pomegranate tree is considered as almost a certain cure for tape-worm in India, both with the Europeans and natives; and also to add the mode of preparing and administering it, as, if any practitioner, from the case related, should use the infusion of the bark of the fruit, which is known to be useful in chronic cases of dysentery and diarrhœa, he would feel disappointed, as I believe it is not of the slightest use in tape-worm.

℞ Cort. recent. Radic. Punic. Granati, ℥viij., Coque in Oiij. Aquæ ad Oij. Cola.

Of this decoction the patient is to drink a wine glassful, and to repeat that quantity at longer or shorter intervals, as the sickness and faintness, which it generally produces, will allow, until he has drunk the whole. The worm is generally voided in a few hours after the patient has begun to take the medicine, and not unfrequently comes away alive.—I remain, sir,

Your obedient servant,
P. Leslie, M.D., M.R.C.S.L.

Wilton-Place, Belgrave-Square,
March 14, 1837.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Practical Observations on the Venereal Disease, and on the Use of Mercury. By ABRAHAM COLLES, M.D., Surgeon to Steevens's Hospital, and late Professor of Surgery in the Royal College of Surgeons in Ireland. 8vo. pp. 352.

MEDICAL authors are in general divisible into two classes—first, those who write to get a name, that it may be said—" Mr. so-and-so is an author;"—and secondly, those who write for the sake of communicating to the world the results of their experience, and so affording to others the means of participating in the benefits resulting from the opportunities which they may have enjoyed.

To this latter class belongs the author of the work before us. Dr. Colles has been long in the enjoyment of the highest reputation as a practical surgeon: not content with having, as Professor of Surgery to the Dublin College, communicated his precepts to a large number of the present and rising generation of Irish surgeons, he now comes forward, while yet in the full vigour of his intellect, to narrate what he has seen and learned in the course of a long and extensive practice among all ranks, for the benefit of his junior professional brethren.

It may be presumed that this is a purely practical book: we have here a good practical description of the various forms in which venereal symptoms, both primary and secondary, present themselves, and most valuable observations on the mode of treatment. The author's second chapter, " on the administration of mercury," highly deserves an attentive perusal: he insists upon every patient being put through a preparatory process prior to a course of mercury, and attributes much of the disrepute into which this remedy has fallen to the neglect of this process.

We have not space to give an analysis of the subjects treated of in this work, but we cannot omit a particular reference to the chapter on syphilis in infants, which contains the most complete and interesting history we are acquainted with of the phenomena of that disease at this early period of life.

A second part of the work is devoted to the use of mercury in diseases not venereal: this part might have been somewhat more extended without being tedious; nevertheless, it contains the narrations of several cases highly illustrative of the efficacy of the remedy. We can with perfect sincerity say that we have read every part of the book with much interest and instruction, and recommend it as highly deserving a place in every practical man's library.

MEDICAL GAZETTE.

Saturday, March 18, 1837.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

PROSPECTS OF LEGISLATION FOR THE PROFESSION.

MR. WARBURTON'S LABOURS.

SEVENTEEN to four in a Committee of twenty-one, is a proportion which promises at least despatch of business. Seventeen Poor-Law supporters will make quick work with four opponents, while upon these four the task of bringing the merits or demerits of the medical arrangements of the system before Parliament, almost entirely devolves.

The Committee, it may be said, was formed in the usual way, and without any view to partiality. How odd, then, that upon its formation, when the real state of things was made manifest, a motion, expressly intended to balance inequalities, or at all events to approach such a desirable end, was discountenanced. Mr. Walter's simple and fair expedient of adding six members more to the Committee, whereby the friends of thorough inquiry would have been increased to ten, still leaving seven majority on the other side, was rejected on a division. But the numbers that divided on the occasion afforded a satisfactory demonstration. Allowing for the votes of the adherents of the party in power,

so tenacious of the present Poor-Law, and clinging to it as they do to other things much more substantial, the minority was sufficient to show that there is still hope of success, when the present aspect of affairs is altered. We have long since said that it was impossible to entertain any very sanguine anticipations from the embodiment of Lord John Russell's scheme; nor has any thing since occurred to induce us to modify our opinion. In the event of a dissolution, however, hopes must rise, and the prospect decidedly brighten.

In looking over the list of the Committee, many, we doubt not, will have been struck with the absence of Mr. Warburton's name. What has become of Mr. Warburton, that great patron of the profession, the late presiding genius of the Medical Education Committee? Is he laid up with the *grippe* or the gout; or why is he not forthcoming? Such must have been the affectionate inquiry after the honourable member for Bridport, by those who afar off were charmed and enchanted with the loudly-trumpetted exertions of the famous chairman — by those who fancy that a patriot and a great man ought never to slumber or sleep, but that he should persevere to the death in the glorious path in which for a time he moved.

But is human nature capable of this? Is it not possible that even the indefatigable Mr. Warburton should have changed his mind in the course of time, and that he may have formed the opinion that he has had quite enough of trouble with medical affairs, and of credit as much as he had any title to. It should not be forgotten neither, that he is now a regular senator—a Fellow of the University of London—while he still holds his shares and his proprietorship in the Gower-street College.

After such labours and such appointments, is it not natural that the honourable member should enjoy his "ease in his inn," and trouble himself as little as possible in future with the perplexities of medical legislation? True, he is pledged to *report* on the mass of information gathered on that invaluable inquest at which he presided. But the whole of the evidence has not yet seen the light; a portion only of it has had that privilege, leaving behind all that relates to the profession in the provinces, and the education pursued in the provincial schools. Till this comes forth it would, of course, be premature to report: the evidence must first be laid, in its entire form, before the medical practitioners of the empire. To take this preliminary step Mr. Warburton has not yet had leisure, — which must be a source of considerable annoyance to him, as we happen to be aware of his having years ago promised several parties the almost immediate publication of their evidence; nor did the conflagration of both Houses of Parliament interfere to prevent his performing his promise.

By the way, we recollect the levelling part of the medical press about that time rang aloud the changes on the "providential" escape of the documents of the Committee: there would be no interruption of Mr. Warburton's labours; the evidence would be published; the report — the long-expected report, *diu multumque desideratum* — would appear in due time. How gratifying that the immense expense of time and money bestowed in collecting so splendid a mass of evidence did not go for nought, but that, as they said, we might still look forward with confidence to the sweeping changes to be effected by the member for Bridport, and the snug prospect of a "one Faculty."

Patient waiters on Providence, what is it you any longer expect from Mr, Warburton? See you not the hon.

member comfortably settled in the council seat of the New University?—See you not his ill-disguised solicitude to become its MAJOR-DOMO, by procuring the place of *registrar* for a certain creature of his own?—And think you that he will pull down that house about his own ears, in order to set up for you a sort of "liberty-hall"? or that even if he would, he could, procure a charter for another establishment different from that which has been lately with so much difficulty obtained?

But in sober seriousness, what *has* become of the mass of evidence gathered from the lips of many of the most distinguished physicians and surgeons of Scotland, Ireland, and the provinces? Is this a time when such a heap of valuable information should remain in abeyance?—Now, when the constitution and character of the profession throughout the empire is subject-matter to be seriously considered in connexion with the yoke and brand which the Poor-Law potentates are endeavouring to fix upon it? Is this a time for such documents to be allowed to lie useless, as so much waste paper, while we are patiently to expect them hereafter when they come forth obsolete and flat? Will the *report* compensate us,—a report, of the possibility of constructing which we long ago expressed our doubts, and now entertain them more strongly than ever?

What report, we ask, can Mr. Warburton possibly draw up, having the least tendency to a remodelling of the medical grades, or levelling them all into one, when, in addition to his original position of proprietor and shareholder in the University College, he has accepted the appointment of a Councillor of the University of London; both establishments being recently chartered with his full concurrence? Let the honourable member for Bridport alone, when he has got into a comfortable birth: *ibit qui zonam perdidit*, we doubt not, would be his reply, were he pressed on the subject, like that of the old soldier in Horace, who had got quite enough of warfare as soon as he stocked his purse. Had Mr. Warburton not succeeded in finding that "port" where he may "bid adieu to hope and chance," we should have better expectations of his future exertions.

As it is, we despair of ever seeing a line of this once deeply-longed-for report, but which nobody now ever dreams of. Our despair is luckily not of a sombre cast; we are merely amused at the verity of our own predictions. Amusing, however, as may be the non-appearance of the report, it is otherwise in respect to the *evidence;* nor can we lay down our pen without once for all demanding to know why is not the *whole* of the medical evidence given to the public; for this is precisely the time, if ever, when its publication can be of any use?

DUTY OF THE MEDICAL CORPORATIONS

AT THE PRESENT CRISIS.

To the Editor of the Medical Gazette.

SIR,

YOUR correspondent Chirurgus, "who is manifestly in the councils of his order," has taken some pains to convince your readers that the general practitioner, being placed between *two* stools, must inevitably come to the ground—that the natural relation between him and the medical corporations does not entitle him to look to either of them for protection and support; because—

> "The child whom many fathers share,
> Hath seldom known a father's care."

A gratifying announcement, truly!

There has long been, it must be confessed, a growing conviction in the minds of general practitioners, that such was the case; and recent events have forced the most moderate men to this unwelcome conclusion, and to the admission, that such a state of things urgently requires a remedy.

The College and the Hall had better look to this; the eyes of the profession are now upon them.

Stat sua cuique dies.

Why should either of these bodies waste any time in vain and fruitless disputes* with a pack of jesuits, on the literal meaning, or the spirit, of a clause relating to the qualification of medical officers? Could no better occupation be furnished? Have not all these bodies been officially and repeatedly informed, from respectable and authentic sources, of the injuries and insults received by their Licentiates from the Poor-law authorities? Do they doubt the representation of facts as notorious as the sun at noon-day; or have they no sympathy for men suffering such unmerited and intolerable grievances? Will they permit the profession to be deeply degraded, and its usefulness seriously impaired, without making one well-directed effort at resistance?

What they *will* do, remains to be seen. What they can do, has been stated. What they might and should do, you have properly indicated. Let us hope, then, they will arouse, at length, from their lethargy, and declare to the legislature, even in these dog-days of political economy, that the present system of medical relief to sick paupers is destitute of humanity, injurious to the community, and intolerably degrading to the profession.

Such a step must lead to the best results. It must command attention and ensure respect; it must raise the hopes and augment the efforts of the whole profession.

If, at any period, active union and cordial co-operation can be useful to the profession, now surely is the time. If it be desirable that one sentiment should animate the entire body of the profession, that sentiment should be—"*He who allows oppression, shares the crime.*"—I am, sir,

Your very obedient servant,

A Country Practitioner,
but no Slave.

March 13, 1837.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 14, 1837.

Dr. R. Bright, the President, in the Chair.

Dr. Bostock on the Pathology of the Urine.

A paper was read containing some suggestions, by Dr. Bostock, of a plan for obtaining with greater precision a knowledge of the principal pathological conditions of the urine. The author adverts to the fact, that our knowledge of the changes in the chemical and physical properties of the urine, and of the relation which these bear to the morbid changes in the constitution, is less than might have been anticipated from the numerous experiments performed upon it. To obviate this defect, he suggests to practitioners to institute a series of what may be called statical experiments, made precisely in the same mode, and consequently admitting of direct comparison with each other. In the prosecution of this plan, an individual was selected, as the standard of comparison, of sound constitution and regular habits. The average healthy state of the urine of this individual was first ascertained, and afterwards the nature and amount of the occasional deviations, with the causes to which these were referrible. This object being first attained, we may compare this standard case with other individuals, noting the differences of constitution, habits, &c. The circumstances which the author has selected for experiment are the following:—External characters, including colour, odour, clearness, specific gravity, &c.; degree of acidity; presence and amount of albumen; amount of residuum after evaporation; proportion of this soluble in alcohol; amount of saline contents; of calcareous salts; and spontaneous changes. As a specimen of the tabular form, the author subjoins a synopsis of some experiments performed on the urine of the healthy individual, and also on that of the patient with exostosis, whose case was read at a late meeting.

A paper was then read, containing—

"*A Description of two new Instruments,—the first for tying Polypi of the Uterus, Nose and Ear, and encysted Tonsils; the other for sewing together the edges of vesico-vaginal and recto-vaginal Fistulæ.* By William Beaumont, Esq., Surgeon to the Islington Dispensary."

The advantages attending the use of the former instrument, the author considers to consist in the greater facility of applying the ligature, in its exerting a greater power of constriction, and in its being capable of being removed as soon as the noose is tied, without any diminution in the degree of constriction. The author relates four cases—three of polypus in the meatus auditorius externus, the other in the nostril, in which he had operated with his instrument; in all, the relief remains complete as far as he is aware, and in the three former instances the hearing of the

* Vide 2d Annual Report of Poor-law Commissioners; Appendix C.

patients was to a great degree restored immediately after the operations.

The paper was accompanied with diagrams of the several instruments; and the instruments themselves were exhibited and explained to the meeting by the author.

CLINICAL LECTURES,

DELIVERED AT THE

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY,

During the Session 1836-7.

By Professor Graves.

Lecture VIII.

Glanders and Button-farcy in the human subject—Particulars of a case of Glanders, with the post-mortem appearances—Remark on the variety of Skin diseases produced by the introduction of an animal poison into the system—Case of Button-farcy—Analogous appearances, where, as in Typhus, an animal poison is sometimes generated in the body—Furuncular inflammation, or carbuncle, generated by animal poison—Also Tubercles—Sometimes a præternatural whiteness precedes the purple hue of mortification—Remarks on Phlegmasia dolens—Phlegmasia dolens of the Eye.

In pursuance of my intention, as announced in a former lecture, I shall proceed to-day to the consideration of two affections resulting from animal poison, one of which has been but recently introduced to the notice of the medical profession; of the other, I am not aware that there are any published cases in existence. I allude here to glanders and button-farcy in the human subject.

The profession is chiefly indebted to the researches of Dr. Elliotson for the first accurate account of glanders in the human subject, a disease which has now excited a very large share of attention here and on the continent. Many other observations, published since Dr. Elliotson undertook the illustration of this disease, have established the fact, that the morbid matter secreted by horses labouring under glanders may communicate the infection to the human subject, and thus give rise to a loathsome, painful, and generally fatal disease. From the notices which I have been able to collect, it appears that glanders in man is of very frequent occurrence in Ireland—so frequent, indeed, that I think the legislature is called on to imitate the wise example of the Prussian government in placing glandered horses under the surveillance of the police.

Like many other animal-poisons, that of glanders does not seem capable of affecting every individual indiscriminately; indeed the average susceptibility must be small, for grooms and veterinary surgeons take few or no precautions in examining the diseased animals, and yet the proportion infected compared with the number exposed is by no means considerable. That such persons exhibit great carelessness in examining glandered horses, appears from the directions given in books on Farriery, "that the finger should be introduced into the nostrils for the purpose of ascertaining whether certain spots suspected to be ulcers are so or not." Now when the viscid gluey nature of the discharge from the nostril is taken into account, we cannot but conclude that this operation of introducing the finger into such a mass of vitiated and poisonous secretion would more frequently prove the means of infection, were the human constitution very susceptible of the poison, for we are to recollect that the fingers of such persons are seldom free from scratches and abrasions.

I shall now read the following case of glanders in the human subject. It is one of extreme interest, and has been most faithfully and graphically detailed. It occurred in the Richmond Hospital, and has been communicated to me by Dr. M'Donnell. You will find in it many points of resemblance to a series of cases translated from a German journal, and published in a late number of the Medico-Chirurgical Review.

Patrick Wallace, a healthy, muscular man, aged 20, was admitted into the Richmond Surgical Hospital on the 6th October, 1836. It was stated that he had been in care of a glandered horse, driving, cleaning, &c. and that he had been in the habit of drinking out of the vessel from which the horse drank. It appeared also that he had had an abrasion on one of his ears. On admission he had much of the appearance of a person labouring under cynanche tonsillaris: he could only open his mouth to the extent of half an inch; this was the only uneasiness complained of. The left tonsil was very much enlarged, red, hard, and projecting towards the middle line; no fluctuation could be felt. There was a general fulness about the angle of the jaw, extending upwards nearly as far as the zygoma. The submaxillary gland on the same side was also enlarged and indurated. These symptoms had been ushered in by feverishness, a few days previous to admission. He was ordered to have eight leeches to the throat, to be followed by a poultice, and a bolus composed of calomel and jalap.

Next day the external swelling was found to be increased; greater difficulty of opening the mouth; the tonsil still hard and swollen. Twelve leeches were applied to the fauces, and the patient took

the tartar emetic mixture of the hospital, with sulphate of magnesia.

On the 15th of October the disease is reported to be on the increase. Tonsil still hard, but no fluctuation; left side of the face greatly swollen; eye of same side nearly closed from tumefaction of the lids; general inflammatory appearance over the cheeks, and great hardness of the tissues about the angle of the jaw of the same side extending towards the chin; several circumscribed spots of redness, varying in extent from the size of a sixpence to that of a halfpenny, with irregular margins, scattered over different parts of the body. Two pustules observable on the left leg.

19th.—A vesicle containing a yellowish serum observable on the left tonsil; the same inability of opening the mouth continues; increase of swelling over the left side of the face; a small abscess has formed on the posterior part of the left forearm; some delirium during the night; three evacuations from the bowels. The tonsil to be brushed over with a solution of nitrate of silver; a blister to the fauces: the tartar emetic mixture to be continued.

17th.—Some sleep during the night, interrupted by delirium of a low muttering character. Patient appears willing to answer questions, but cannot, from obstruction in the mouth. This, however, lasts but for a moment, and he then lapses into a state of incoherency. Mouth open to the extent of half an inch; left eye closed; considerable swelling of the left side of the face, which is indurated, hot, tense, and shining; all the glands on both sides of the jaw, but particularly on the left, are swollen and hard; same state of tonsil; nares dilated; breathing stertorous, somewhat hurried, about 28 in the minute, and interrupted by frequent sighs. Pulse very small, rapid, intermitted, and cannot be counted; skin hot, tongue furred, teeth covered with sordes. He complains of great thirst, but says he feels no pain; it is evident, however, that he feels great uneasiness in the joints and limbs when moved. There is, however, no swelling or redness of the joints. There is no discharge from the nostrils, nor is there any perceptible ulceration of the mucous membrane of the nose. No apparent affection of the absorbent glands in any other part of the body.

During this period vesicles and pustules of various sizes and at various stages of growth had made their appearance on different parts of the body, particularly on the back. They varied in size from the head of a pin to the section of an almond. In the first stage they resembled very minute vesicles, scarcely surrounded by any inflammatory border, and containing a limpid serum. In the second stage, the serum was replaced by pus; there was a considerable blush of redness around each pustule, which at this period became greatly increased in size. When one of the vesicles was punctured, the serum appeared to come from a single cavity under the cuticle; this operation did not produce any subsidence of the tumor, a considerable hardness still remaining in the cutis or beneath it, with a cavity in the centre in which the serum was contained. A number of achores existed in various parts, congregated together, and not much larger than the head of a pin. These clusters were surrounded by *white raised margins*, having much the appearance of wheals, and about a line and a half or two lines in breadth; between these margins and the achores there existed a line of redness. The whole taken together are rather of an oval shape. There also existed numerous inflammatory spots on the right shoulder, left arm, and other parts of the body. These were of a dark brown, approaching to a livid colour; when pressure is made on them the colour disappears, but returns immediately when it is removed. On running the finger over them a small hard tumor was felt in the centre: the margins of these spots were irregular.

On the 17th the character of the disease became more plainly developed: at 3 o'clock P.M. pus in considerable quantity was observed to issue from both nostrils. The patient was ordered to take the solution of chlorate of soda internally in drachm doses, three times a day, and also a mixture composed of carbonate of ammonia, liquor ætheris oleosus, and camphor mixture. At 5 o'clock P.M. he was found half out of bed, his head resting on the pillow; still able to express his wants; pulse not to be counted; legs and feet cold; breathing stertorous; numerous stigmata scattered over the surface of the body. The purulent discharge from the nostrils has ceased, but there is a discharge of mucus from the mouth, with considerable fœtor of breath.

8 o'clock P.M.—A copious perspiration has broken out over the body; face red, tense, shining, and very much swelled: swelling has now extended to the right side of the face; right eye nearly closed; can open the left better; a few pustules have made their appearance at the inner canthus of the eye. Pulse, tongue, and skin, as in last report; delirium and muttering continue.

Died at 4 o'clock A.M. October 18th.

On examining the body ten hours after death, the redness was found to have disappeared from the face; the glands about the left angle of the lower jaw as before mentioned: they were found matted to the surrounding parts. The cellular tissue covering the submaxillary and parotid

glands was infiltrated with serum, and indurated; numerous depositions of pus were found in the tissue of the submaxillary and parotid glands. The brain was firm, but its ventricles contained a considerable quantity of fluid; the arachnoid membrane was opaque in many places; several patches of vascularity were observed on the pia mater. The lungs presented a congested appearance; numerous pustules were scattered over their surface, some separate, yellow in the centre, and surrounded by an ecchymosed border, others existing in clusters. They resembled in every respect those found on the surface of the body. The lining membrane of the larynx was very much inflamed, especially about its upper part and about the epiglottis. The inflamed parts in this situation were of a livid hue. There was some appearance of vesicles in the trachea, but this could not be satisfactorily ascertained. The bronchial tubes were filled with mucus. The stomach contained a quantity of yellowish green mucus; its lining membrane presented an ecchymosed and inflamed appearance. The liver was somewhat enlarged, and adhered by its inferior margin to a few folds of intestine. The periosteum did not exhibit any appreciable deviation from the normal state.

One of the chief things to be noticed in the foregoing case is the variety of inflammatory affections observed in the skin, as the result of the introduction of an animal poison into the system. There was in the first place the general diffused redness of the face, then superficial inflammatory spots on the shoulders and arms resembling erythema nodosum; in the next place, scattered pustules of various sizes, commencing in the form of a vesicle, which afterwards became a pustule surrounded by an inflammatory zone; and lastly, achores congregated together and surrounded by an elevated white margin, within which there existed an inflammatory ring of a red colour. Another point worthy of notice is the state of the lungs and bronchial mucous membrane. The lining membrane of the larynx, particularly in the vicinity of the epiglottis, was inflamed and of a livid colour, and there was an indistinct appearance of vesicles in the trachea. But what was particularly deserving of note in the lungs, was the existence of pustules on their surface, bearing the closest resemblance to those found on the surface of the body. It is not stated whether there was any appearance of vesicles or pustules in the nose, pharynx, or œsophagus, but we are told that the stomach was ecchymosed and inflamed.

The following case was witnessed by myself and Dr. Halahan, and seems more nearly allied to the variety of glanders termed button-farcy. I regret that want of time has prevented me from arranging its details in a form more worthy of your attention, and were not the disease one of comparatively rare occurrence, I should not have ventured to lay the case before you in its present imperfect state.

The subject of this case was a gentleman residing at Rathmines, an extensive proprietor of horses, and who, having originally graduated as a surgeon, exhibited much skill in the veterinary art. About the time of his illness he had had some horses in his establishment labouring under glanders and button-farcy, to which he paid particular attention. After having laboured for some days under considerable lassitude and derangement of the stomach and bowels, he was attacked on the 8th of July with rigors, followed by great thirst, excessive heat of skin, and pains in his limbs. The moment he felt himself attacked in this way, he said he was sure that he had got some dangerous infection from the horses, and would never recover. He took some blue pill and colocynth, which produced a few dark and very fœtid evacuations. On the 9th, his pulse was 94, his urine very high coloured, his thirst and feverish symptoms rather increased, and he suffered greatly from constant nausea and vomiting. A tumor now began to appear about three inches above the inner ankle of the right foot. He applied a poultice over it, but was obliged to remove it in a short time in consequence of the pain occasioned by its weight. The tumor was about the size of half a walnut, of a dull red colour, tense, shining, and exquisitely painful. Its external aspect was peculiar, and might be compared to something intermediate between a boil and a spot of erythema nodosum. On the 10th, another tumor of the same character appeared near the outer ankle of the same leg; and in this way the disease went on, tumor after tumor appearing on different parts of the body, with an increase of the feverish symptoms, until the 20th of July, when he was first seen by Dr. Halahan. At this time several tumors had appeared on different parts of his body; there was one of an extremely painful character on his head, and he complained of great tenderness and pain along the right clavicle. His thirst was still urgent; his restlessness excessive; the slightest motion gave him exquisite pain, and sleep had completely abandoned him. He had endeavoured to regulate his bowels by purgative medicines, and had applied leeches to the tumors and to the clavicle at various times, but without any decided benefit. There were eight or nine tumors on different parts of the body, of the cha-

racter before mentioned, without any tendency to suppuration, and so exquisitely painful that he could only bear a single sheet over him. The inflammation about the clavicle, which was of a diffuse character, had extended up the neck and over the right shoulder; there was not much swelling except about the clavicle; the colour of the affected parts was a peculiar dusky red. Immediately over the clavicle two vesicles were observable, filled with a transparent fluid. Three dozen leeches were ordered to be applied over the clavicle and shoulder, and the patient was directed to use chicken-broth, beef-tea, and other light nutritious articles.

On the 21st, all symptoms are stated to be on the increase. His fever, thirst, and sleeplessness, are undiminished; his tongue furred and dry; his teeth covered with sordes; his pulse small, weak, and rapid; his nausea and vomiting not so troublesome. He had received no benefit from the application of the leeches; the swelling and stiffness of his neck was increased, and he had now some difficulty of swallowing. The erysipelatous surface of the neck, clavicle, and shoulder, were lightly brushed over with lunar caustic, which gave the patient an agreeable sensation, and from which he stated that he derived much relief. This was repeated the next day at his own request, and with equal benefit; the difficulty of deglutition diminished, and for two days he went on pretty well. On the 25th, there was an evident increase of fever; the tumors over the body and limbs were increasing in size and number; and his anxiety, restlessness, and sufferings unabated. He had taken alterative doses of calomel and James' powder, and his bowels had been regulated by mild aperients and enemata. I saw him for the first time on the 28th. His pulse was then 98, small, and easily compressed; his thirst excessive; his restlessness and agony such as would strongly excite the pity of persons most conversant with scenes of human suffering. He had several tumors over different parts of his body, all exquisitely painful, and in their aspect something between boil and erythema nodosum. Some of them were hard to the touch, others which appeared more advanced, were softer, and had a boggy feel. There was however, no appearance of any thing like suppuration. He was ordered sulphate of quinine, chicken broth, ale, and other light nourishment, and an opiate at night. On the 31st, a tumor appeared on the right side of his forehead, larger and more painful than any of the rest. Another of a similar character showed itself on the right clavicle, which had been previously affected. Shortly after their appearance, vesicles were observable on their surfaces, such as generally precede mortification in cases of anthrax and malignant carbuncle. Next day he was evidently worse: his pulse was 108, his fever, pain, and restlessnes unabated; and a miliary eruption began to make its appearance over his chest and abdomen. The vesicles now began to increase on the surface of the tumor, his fever and restlessness were aggravated, and his mind, which had been hitherto collected, began to wander. His restlessness was so excessive that he could not remain for a moment in the same position, and being a person of much mechanical ingenuity, he had a set of pullies constructed and fastened to his bedstead, so that he could move himself in various directions. His medicines and diet, with the addition of claret, and opiates at night, were continued as before.

On the 6th of August he was still worse; the tumor on the head continued to enlarge, and decided sloughing had taken place. The tumor on the clavicle presented the same aggravation in appearance and character, and a fresh tumor had appeared on the back of his head. A pustular eruption now began to make its appearance over his body, chiefly over the abdomen and limbs, his symptoms became aggravated in every respect, the delirium and watchfulness increased, and he died on the 10th of August, about thirty-three days from the commencement of the disease. He attributed his illness to attending horses, four of which had died of button-farcy; and what is also curious, his nephew, who had also been engaged about the diseased animals, had fever of a typhoid character, with petechiæ of a larger sort than usual, but ultimately recovered.

The symptoms of glanders in the human subject have been so fully detailed by Dr. Elliotson and others, that it only remains for me to make a few observations connected with this subject. In the first place it may be observed that most diseases produced by the deleterious effect of animal poisons on the economy show a tendency to cause not only fever often of a malignant character, but also various forms of external disease, chiefly limited to the superficial glands, subcutaneous cellular tissue, and skin. In urticaria, small-pox, and measles, the external disease is chiefly limited to the skin: in scarlatina, we have often swelling of the parotid gland, with infiltration of the adjacent cellular tissue in addition to the cutaneous eruption; in syphilis and cases of dissecting wounds, we have disease of the skin frequently combined with an affection of the superficial lymphatic glands. The same observation applies to typhus, many cases of which are characterized by an eruption of

spots over different parts of the body, or by the occurrence of what are termed petechiæ. On these matters I need not enlarge, as you are all well acquainted with them, but that vesicles and pustules very similar to those observed in dissection wounds, and other diseases produced by the direct introduction of animal poison into the system, may arise from the action of morbid changes spontaneously occurring in the body, is a fact which admits of being proved, and opens to us a new and interesting field of inquiry. Thus, in cases of typhus, where the effect of pressure or some other accident has occasioned bed-sores of a bad character, and even where there are no bed-sores present, I have on several occasions seen low secondary fever produced, and have observed vesicles or pustules appear on the skin, similar to those described by Mr. Colles as accompanying the fever of dissection wounds. An example of this occurred some time ago at this hospital, and you have recently witnessed another in the case of a young man recovering from typhus. It might be argued that the secondary fever and eruption in such cases arise from the absorption of morbid matter into the system, and I am willing to admit that there is some colour of argument for this statement where the patient labours under bed-sores of a bad and gangrenous character, but that this explanation is not the true one appears from the case of the young man to which I have alluded. He had no bed-sores to account for the secondary fever and eruption; and we can only explain by supposing that it is the result of a poison generated in the system during the course of fever. This is particularly deserving of notice, as I am not aware that any author on typhus has noticed this symptom, or pointed out the circumstances under which it occurs. The same phenomenon is occasionally observed where, in consequence of external injury, diffuse cellular inflammation has taken place. Thus, several years ago, a woman was admitted into the Meath Hospital, who had diffuse cellular inflammation in consequence of receiving a kick on the chest. After a few days, Colles's pustules appeared on different parts of the body, and she died with symptoms of croup. On dissection, the croupy symptoms were found to depend on an eruption of vesicles filled with opaque serum, over the lining membrane of the larynx and trachea. Something analogous to this was observed in the case of Wallace; and the coincidence is further strengthened by the frequent occurrence of disease of the lining membrane of the larynx and trachea in many other febrile affections accompanied by cutaneous eruption, as small pox, measles, syphilis, and scarlatina.

Another point which is deserving attention with reference to the phenomena of external disease in cases where animal poisons have been generated in the system, or arisen from infection, is the occurrence of tumors in different parts of the body partaking of the characters of furuncular inflammation or carbuncle, and running through a somewhat similar course. These tumors formed a very prominent feature in the case of Wallace; and in the gentleman who laboured under button farcy, they constituted one of the most important symptoms of the disease. We also observe something similar to this in that form of venereal which Mr. Carmichael terms tubercular, and which is characterized by the appearance of small, hard, dark red tumors, on various parts of the body, which exhibit a very imperfect tendency to suppuration, and frequently give rise to sores of a bad and unfavourable character. Another circumstance observed in Dr. M'Donnell's case deserves some share of attention; I allude to the white elevated margins, like wheals, around the redness which more immediately encircled each cluster of achores, and which we are to look upon as in a less advanced stage of its progress, being as it were only the first stage of the latter. It is a curious fact that on many occasions a preternatural degree of whiteness precedes the redness and congestive purple hue which ushers in mortification. This is generally known in the case of the nose when frost-bitten, and which always appears preternaturally white in the commencement. Something analogous to this was observed in some cases of bad typhus treated here in 1826 and 1827. The nose sometimes assumed a peculiar white colour, and not unfrequently exhibited a tendency to mortification. When first seen it had a preternatural whiteness, and looked very like a nose made of white wax; in the course of a few hours it changed to a purplish red, and exhibited symptoms of approaching gangrene. Again, in urticaria, we often see some portions of the inflamed skin assume a white colour, and the same occurrence may be noticed likewise in the wheals caused by nettles or the stings of bees. In general we connect the idea of integumental inflammation with the appearance of redness, and this phenomenon is explained on the hypothesis that a preternatural quantity of blood is circulating in the inflamed parts. How then are we to account for the facts I have mentioned? To what cause are we to attribute the co-existence of increased vascularity, and a remarkable whiteness or pallor of the parts? a state displayed in a very remarkable manner in *phlegmasia dolens*. I think the explanation is not very difficult when we recollect that the capillary vessels of

the white tissues of the body contain no red blood in their healthy state. It is easy to conceive that in certain stages of inflammation the quantity of serous or white blood circulating in any of these tissues may be suddenly much increased, and that this increase may be accompanied by all the phenomena of inflammation except redness. In certain cases, as phlegmasia dolens, the colour is permanently white; in other cases the white is exchanged for redness when the inflammation has increased in intensity: but perhaps we should not use this expression, for the phenomena of phlegmasia dolens prove that a *white inflammation* may be quite as intense as *red inflammation*,—a fact which I saw exhibited in a remarkable manner in the case of a woman in this hospital labouring under phlegmasia dolens, and in whom the disease suddenly attacked the eye, and destroyed it in a short space of time, disorganizing it rapidly without the supervention of any redness during this destructive process. *Phlegmasia dolens* of the eye constitutes a disease never before remarked in that organ, and its occurrence and phenomena were peculiarly valuable in explaining the true nature of that remarkable disease. Having already published an account of this case, I shall not at present enter into further details, but merely state that the woman affected laboured under well-marked phlegmasia dolens of the leg, occurring after delivery, and that the disease of the eye came on very suddenly, and was accompanied by agonizing pain, and exquisite tenderness in the conjunctiva covering the sclerotic. This membrane was in a very few hours tumefied, and distended in its subjacent cellular tissue by a perfectly colourless effusion of fluid, apparently sero-gelatinous, and which raised up the membrane itself so as almost to conceal the cornea from view. In the course of the day the internal structures of the eye became engaged, and vision was speedily destroyed. This case appears conclusive against the doctrine that phlegmasia dolens depends on inflammation of the veins. I am sorry that Mr. Middlemore has failed to notice phlegmasia dolens of the eye in his late admirable work on the diseases of that organ.

POISONING WITH CASTOR OIL SEEDS.

An inquest was held, on Wednesday, on the body of Clementina Clara Powell, aged 18. Mary Ann Powell deposed she is sister of the deceased, and that their mother keeps a druggist's shop in Vauxhall-Road. On the Wednesday preceding, their brother, a lad of 14, apprenticed to a druggist, brought home some castor oil seeds, and asked his sisters to taste them, but told them not to eat too many of them, as they were strongly purgative. Witness ate four or five, a younger sister two, and deceased about twenty of them. The same night they were all taken ill. Deceased gradually became worse, and died on Monday morning. Alfred Powell deposed, that having read in the Materia Medica that the seeds were an opening medicine, he purchased some, and gave them to his sisters. He did not know that the quantity eaten by deceased was dangerous. He tasted one of them himself. Mr. Gartside deposed that he was called to the deceased on Thursday morning, and found her in a languid state He has since opened the body, and found the stomach and intestines inflamed to such a degree as was sufficient to cause death: twenty castor oil seeds are quite sufficient to produce such an inflammation.—Verdict, "Chance medley."—*Times; from the Liverpool Standard.*

APOTHECARIES' HALL.

LIST OF GENTLEMEN WHO HAVE RECEIVED CERTIFICATES.

March 16, 1837.

Benjamin Nelson Lingwood, of Cheltenham.
Isaac Palmer Hall, of Dudley.
John Acton, of Bromley.
James Wilson, of Charmouth, Dorset.
Joseph Machill, of Rastrick, Yorkshire.
George Hudson, of Oldham.
Frederick Richard Bray, of Marlow.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Mar.* 14, 1837.

Abscess	1	Hernia	2
Age and Debility	47	Hooping Cough	15
Apoplexy	9	Inflammation	23
Asthma	16	Bowels & Stomach	2
Cancer	2	Brain	3
Childbirth	1	Lungs and Pleura	8
Consumption	66	Influenza	13
Convulsions	30	Insanity	1
Croup	2	Liver, diseased	3
Dentition or Teething	5	Measles	4
Diarrhœa	1	Mortification	4
Dropsy	13	Paralysis	1
Dropsy in the Brain	10	Small-pox	1
Dropsy on the Chest	1	Spasms	1
Erysipelas	1	Tumor	2
Fever	8	Unknown Causes	239
Fever, Scarlet	1		
Heart, diseased	4	Casualties	2

Increase of Burials, as compared with the preceding week . . 280

METEOROLOGICAL JOURNAL.

March.	THERMOMETER.	BAROMETER.
Thursday . 9	from 32 to 50	30·01 to 29·89
Friday . . 10	35 48	29·64 29 30
Saturday . 11	30 46	29 29 29·27
Sunday . . 12	20 42	29·28 29·46
Monday . . 13	27 43	29·70 30·08
Tuesday . . 14	26 43	30·21 30·20
Wednesday 15	30 44	30·11 30·01

Prevailing wind S.W.

Except the 14th, generally cloudy, with rain at times; a little snow in the morning of the 13th.

Rain fallen, 025 of an inch.

WILSON & SON, Printers, 57, Skinner-St. London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 25, 1837.

LECTURES

ON

MATERIA MEDICA, OR PHARMACOLOGY, AND GENERAL THERAPEUTICS,

Delivered at the Aldersgate School of Medicine,

By Jon. Pereira, Esq., F.L.S.

Lecture LIX.

I propose to commence, in this lecture, the examination of

LEGUMINOSÆ, OR FABACEÆ,

one of the largest, and, in point of structure, one of the most natural families of the vegetable world; and one also which offers many points of interesting inquiry.

Botanical characters.—Leguminous plants present themselves under three forms; some are herbaceous, some are shrubby, while others form large trees. The leaves are usually alternate, with stipules, often compound, and in some instances, as in Mimosa pudica, are very irritable. The flowers are usually bisexual, rarely polygamous, or dicœcious. The calyx is five-parted, toothed or cleft, inferior, with the odd segment anterior. The petals are five, or by abortion, four, (rarely less than this number, or wanting) inserted into the calyx or torus. A considerable number of the plants of this family have papilionaceous flowers; the large upper petal of which forms the *vexillum* or *standard;* the two lateral ones are called *alæ* or *wings*, while the two lower ones are united by their margins, forming what is called the *carina* or *keel*. Although all leguminous plants have not this kind of flower, yet all plants with papilionaceous flowers belong to this family. The stamina are usually

Fig. 161.—*Papilionaceous flowers.*

(not invariably) ten in number, and they may be distinct, monadelphous, diadelphous, or occasionally, though rarely, triadelphous. The ovarium is simple, superior, one celled, with a simple style and stigma. The fruit is either a legume or a drupe.

Fig. 162.—*Legumes of Ceratonia Siliqua.*

The term leguminosæ, used to designate this order, is evidently objectionable, since all the plants have not leguminous fruit; and, on the other hand, all plants which have leguminous fruit do not belong to this order, for some Amyridaceæ have legumes.

The seeds are (with one or two exceptions) destitute of albumen: the embryo

is either straight, (*rectembriæ*) or the radicle is bent on the cotyledons (*curvembriæ*).

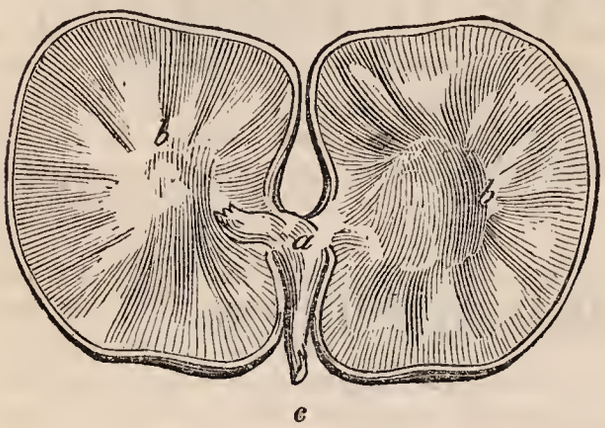

FIG. 163.—*Common garden bean.*

a, Plumule.
b, *b*, Cotyledons, or seed lobes.
c, Radicle bent on the cotyledons (*curvembriæ*).

Division.—Decandolle thus sub-divides this extensive family into four sub-orders.

Leguminosæ.	Curvembriæ.	1. Papilionacæ 2. Swartzieæ.
	Rectembriæ.	3. Mimosæ. 4. Cæsalpineæ.

Properties.—Notwithstanding the remark already made, that with regard to structure, leguminosæ form one of the most natural families of the vegetable creation, yet it must be confessed that, considered with reference to their chemical, dietetical, and medicinal properties, they offer little uniformity. To illustrate this, we may compare the properties of similar organs (seeds, for example) of different leguminosæ: and we shall find that some are valuable articles of food, as peas and beans; while others are medicinal, or even poisonous. Thus the seeds of Spartium junceum in small doses are diuretic, in larger ones, emetic and purgative; and in some other instances we find leguminous seeds having a specific influence over the nervous system: for example, the seeds of Cytisus laburnum are narcotico-acrids, or in some cases almost pure narcotics. Five grains of *Cytisine*, the active principle of these seeds, act as powerfully as three grains of tartar emetic; eight grains acted on Chevallier in a very alarming manner. Bread made of flour containing the seeds either of Lathyrus cicera or Ervum ervilia has in several instances operated in a poisonous manner, giving rise to paralysis or convulsions.

Even plants of the same sub-order will hardly admit of comparison. Thus among Papilionaceæ we find nutrients, demulcents, tonics, astringents, emetics, purgatives, diuretics, narcotico-acrids, and pure narcotics. Cæsalpineæ, for the most part, possess purgative properties, yet with many exceptions; and so with respect to Mimosæ (from the stems of which we obtain gum and astringent matters), substances of varied properties are procured.

SUB-ORDER.—PAPILIONACEÆ.

Spartium junceum.

History.—Theophrastus and Dioscorides speak of a plant which they call σπαρτιον, or σπάρτον, which was probably what Pliny terms *Genista*, though the Roman historian was himself doubtful on this point. The plant referred to is commonly supposed to be the *Spartium junceum*, or *Spanish broom*, which, according to Dr. Sibthorp, is now termed in Greece, σπάρτο.

Botanical characters.—Spanish broom is a deciduous shrub, a native of the south of Europe, having opposite round branches, flowering at the end, leaves lanceolate, but few in number, papilionaceous yellow flowers, in terminal racemes, stamens monadelphous, legumen plano-compressed, many-seeded, glandless.

FIG. 164. — *Spartium junceum: Spanish broom.*

In the Linnean classification, this plant belongs to class *Diadelphia*, order *Decandria*.

Physiological effects.—The seeds are emetic and purgative in large doses, and diuretic in smaller quantities. The two first of these effects are stated by Dioscorides to be those of σπάρτιον. Dr. Pearson calls broom a tonico-diuretic, since it improves the appetite, and invigorates the whole system.

Uses. — They have been employed by Dr. Eccles, of Birmingham, in dropsical cases. Their advantage over other diuretics is their tonic operation, in consequence of which they may be persisted in for an indefinite length of time.

Administration.—The best method of exhibiting these seeds is in the form of *tincture*, prepared at the Birmingham hospi-

tal, of two ounces of the bruised seeds to eight ounces of proof spirit. The dose of this preparation is from one to three drachms. The *powder* of the seeds may be taken to the extent of ten or fifteen grains three times a day, in cold ginger tea, or mint water.

Cytisus scoparius.

History.—Some have fancied that the σταρτιον of the Greeks was our common broom, (Cytisus scoparius), but it is much more likely to have been Spanish broom (Spartium junceum) as already mentioned. Common broom is termed in some botanical works Spartium scoparium, in some, Genista scoparia, in others, Cytisus scoparius.

Botanical history. — This indigenous shrub grows in great abundance in dry gravelly thickets and fields. It is from three to six feet high. Its branches are numerous, long, straight, angular, smooth, and green: the leaves are ternate, stalked, the upper ones simple, the leaflets oblong. The papilionaceous flowers are axillary, stalked, large, of a bright yellow colour: calyx two-lipped; standard large and broad, ovate, keel blunt: stamina ten, connected at the base, and, therefore, really monadelphous, though the Linneanists place this plant in Diadelphia: pistillum solitary. The legume is flat, hairy at the margin, and contains fifteen or sixteen seeds.

In the Linnean classification, it is placed in class *Diadelphia*, order *Decandria*.

Officinal.—The fresh tops of this plant are officinal in the new London Pharmacopœia: they have a bitter nauseous taste, and when bruised, a remarkable odour.

Chemical properties.—Cadet de Gassicourt has analysed the flowers of this plant, but I am not acquainted with any analysis of the stems or leaves.

The ashes of the plant contain carbonate of potash, which, when procured from this source, is termed *salt of broom*, or *sal genistæ*. Hill says, a pound of the green twigs of broom, with the leaves and flowers, yields a drachm and a half of this salt. Hence, therefore, some vegetable salt of potash exists in broom, and which, by incineration, is converted into the carbonate.

Physiological effects.—(*a*). *On animals generally.* In some part of Europe broom is employed as winter food for sheep; and Withering says that it prevents the disease called rot, and is salutary in dropsy, to which sheep are liable. According to Loudon, it is apt to produce disease of the urinary organs,—to prevent which, some recommend the plentiful use of water.

(*b*). *On man.* Broom has been celebrated as a diuretic by Mead, Cullen, and others. "Though very little in use," says Dr. Cullen, "I have inserted this in my catalogue from my own experience of it. I found it first in use among our common people; but I have since prescribed it to some of my patients in the manner following:—I order half an ounce of fresh broom tops to be boiled in a pound of water till one-half of this is consumed, and of this decoction I give two table-spoonfuls every hour, till it operates by stool and urine; and by repeating this exhibition every day, or every second day, some dropsies have been cured." Having very frequently employed broom in dropsies, I can add my testimony to its powerful effects as a diuretic. I cannot call to mind a single case in which it has failed to act powerfully on the kidneys. In some cases it produced a most marked and beneficial effect on the dropsical effusion. According to my experience it is the most certain of all diuretics in dropsies. In large doses, broom is emetic and purgative.

Uses.—It has been principally or solely employed in dropsies, and, as already mentioned, sometimes with great benefit. Of course its chance of cure depends on the nature of the cause of the dropsical effusion. I am not aware of any contra-indications to its use, though it is not improbable that it might be prejudicial in inflammatory cases, or dropsy depending on diseased kidney.

Administration. — The *infusion* of broom of the Pharmacopœia is prepared with an ounce of broom and a pint (20 ounces) of water. The *simple decoction* may be prepared in the way recommended by Dr. Cullen. There is a *compound decoction* in the London Pharmacopœia: it is composed of broom, juniper berries, and root of dandelion, of each half an ounce, water a pint and a half (30 ounces): boil down to a pint. The dose of all these preparations is one or two ounces. The *extract* of the Dublin Pharmacopœia is given to the extent of half a drachm or a drachm. The *seeds* of Cytisus scoparius may be given in tincture or powder, as Spartium junceum. Dr. Pearson remarks "broom-seed is not adapted to thoracic dropsy, especially when that form of dropsy is combined with pulmonary congestion, or with any degree of inflammatory affection of the chest."

Glycyrrhiza glabra.

History.—The γλυκυῤῥιζα of Hippocrates and of Dioscorides are doubtless identical; the latter is supposed by Sprengel and others to be our Glycyrrhiza glabra, by Dierbach to be G. glandulifera, but by Dr. Sibthorp it is said to be the G. echinata, which is now termed in Greece γλυκόριζα.

Botanical characters.—Glycyrrhiza glabra is a native of the south of Europe. It is a perennial plant, with an erect, smooth

stem, four or five feet in height. The leaves are pinnate, with a terminal leaflet: the leaflets are ovate, blunt, petiolated, of a yellowish-green colour, clammy on the under side. There are no stipules. The inflorescence is a pedunculated raceme (Decandolle calls it a spike.) The papilionaceous flowers are bluish or purplish. The fruit is a smooth, oblong, three or four-seeded legume. The Linnean class of this plant is *Diadelphia*, and the order *Decandria*.

Officinal.—The officinal part is the root, or rather the underground stem (*rhizome*), commonly termed in the shops *liquorice root*, and which has been latinized into *radix liquiritiæ*. Its physical properties are too well known to need description.

Extract of liquorice.—By boiling the roots (or rhizomes) in water (generally in copper vessels), and evaporating the decoction, we obtain an extract called in the shops *liquorice juice*, or, according to the countries from whence it is brought, *Spanish* or *Italian juice*. In Spain it is said to be procured from the roots or underground stems of G. echinata. It occurs in cylindrical or flattened rolls, of five or six inches long, and about one inch in diameter. When pure it is black and dry, with a shining fracture, and a sweetish taste: it is completely soluble in water. As met with in commerce, however, it is rarely pure. Neumann obtained 460 of watery extract from 480 of Spanish liquorice. It contains the soluble principles of the root, with some copper scraped off from the boiler by the spatula employed to stir the extract during its preparation. Fée says that four pounds of this extract yield two drachms and a half of metallic copper; but I suspect there must be some exaggeration in this statement. Several preparations of refined liquorice are kept in the shops: one is sold in a pipe form, (*pipe*, or *refined liquorice*) which is an inferior substance, a second is the Pontefract lozenges, and a third has been recently introduced under the name of quintessence of liquorice.

Composition.—Two analyses of liquorice root have been made: one by Robiquet, another by Trommsdorf. The constituents, according to the first of these chemists, are—

Wax.
Acrid soft resin.
Asparagin (Desvaux's *Agedöite*).
Glycyrrhizin (Glycion).
Starch.
Ligneous fibre.
Brown nitrogenous substance.
Albumen.
Malates, phosphates, and sulphates of lime and magnesia.

The substance termed *Glycyrrhizin*, or *liquorice sugar*, is remarkable for its tendency to form difficultly soluble compounds with acids. It is not susceptible of the vinous fermentation.

Physiological effects.—Liquorice root and its extract are emollient, demulcent, and nutritive.

Uses.—The *powder* of the root is employed in the preparation of pills, either to give them a proper consistence or to prevent their adhesion. The *decoction* is employed as an emollient in irritation of the mucous membranes,—especially in catarrh,—and as a vehicle for the exhibition of other medicines. There is a formula for its preparation in the Dublin Pharmacopœia. On account of its emollient properties and saccharine taste, the root enters into several officinal preparations—as the *compound decoction of barley*, *compound decoction of sarsaparilla*, *compound infusion of linseed*, &c.

The *extract* of *liquorice* is employed in the form of lozenges, to allay tickling cough. It is also used to cover the unpleasant flavour of certain substances—as of aloes, in the compound decoction of this substance.

Tephrosia Apollinea.

The leaves and legumes of this plant are frequently found in Alexandrian senna.

Astragalus verus.

History.—Dr. Sibthorp tells us that the τραγάκανθα of Dioscorides, and of the modern Greeks, is the Astragalus aristatus, the gum from which is a species of tragacanth annually sent to Italy.

Botanical history.—The tragacanth of commerce is the produce of several species of Astragalus. Tournefort says that on Mount Ida, in the Island of Crete, it is procured from A. creticus; on Mount Lebanon, in Syria, the Astragalus gummifer yields it, according to La Billardière; while in Asia Minor, Armenia, and Northern Persia, Olivier tells us it is procured from Astragalus verus.

Astragalus verus is a small shrub, not more than two or three feet high, with a stem about an inch in thickness. The branches are covered with imbricated scales and spines, the remains of former petioles. The leaves are pinnate, composed of from six to eight pair of opposite, small, pointed, villous leaflets. The yellow papilionaceous flowers are axillary.

Astragalus gummifer has leaves composed of from four to six pair of oblong, linear, smooth leaflets. The flowers are from three to five, axillary, sessile. The pod is woolly.

In *Astragalus creticus* the leaves consist of from five to eight pair of oblong, acute,

tomentose leaflets, with axillary sessile flowers.

Fig. 165.—*Astragalus creticus.*

The Linnean class of the genus Astragalus is *Diadelphia*, the order *Decandria.*

Production.—Tragacanth is a natural exudation from the stem of the beforementioned plants. The cause of the exudation of this as of other gums, is thus explained by Decandolle. The gummy matter of the stem resides in the bark and alburnum; it is the nutritive juice of the plant; and its escape, therefore, is analogous to hæmorrhage in animals: hence plants in whom it spontaneously occurs are always in a sickly state. The mechanical cause of the expulsion of this juice is dependent on the unequal hygrometric properties of the different parts of the stem. The wood absorbs more moisture from the air than the bark, and hence it swells more. In consequence of its enlargement it distends the bark, which, by the internal pressure of the wood, gives way, and the gummy matter escapes. This explanation is quite in conformity with the facts mentioned by La Billardière,—that tragacanth flows only in abundance during the night, and a little after sunrise. A cloudy night, or a heavy dew, is, he thinks, necessary for its production; for the shepherds of Lebanon only go in search of this substance when the mountain has been covered during the night with thick clouds.

Varieties and physical properties.—Two kinds of tragacanth are met with.

(*a.*) *Flaky Tragacanth: Smyrna Tragacanth* (Martius): *Tragacanth of the Astragalus verus?*—This is the tragacanth usually found in English commerce. It occurs in moderately large, broad, thin pieces, marked with arched or concentric elevations.

(*b.*) *Vermiform Tragacanth: Morea Tragacanth* (Martius): *Tragacanth of the Astragalus creticus?*—This variety is rarely met with in this country, but is common on the continent. It occurs in small, twisted, filiform, spiral pieces. There is more starch in it than in the first variety.

Both sorts occur of a white, yellowish, or yellowish-brown colour. Both are hard, tough, odourless, tasteless, very slightly soluble in water, though they swell considerably in this liquid, forming a thick tenacious mucilage. The fracture is dull and splintery.

Chemical composition and properties.—The following is the *ultimate* analysis of dry tragacanth, according to Hermann:—

Carbon	40·50, or 10 atoms	= 60
Hydrogen	6·61, or 10 atoms	= 10
Oxygen	52·89, or 10 atoms	= 80
	100·00	150

With respect to the *proximate* analysis some difference of opinion exists among chemists. According to both Bucholz and Guerin, tragacanth consists of a gum soluble in water, analogous to gum arabic, and, therefore, called *Arabine;* and a gum insoluble in water, analogous to gum bassora, and, in consequence, termed *Bassorine.*

	Bucholz.	Guerin.
Arabine	57	53
Bassorine	43	33
Water and oxalate lime	—	14
	100	100

Starch is also a constituent of tragacanth; the quantity, however, is small. It is recognizable by iodine.

According to Guibourt, tragacanth contains neither arabine nor bassorine, but is essentially formed by an organized gelatiniform matter, very different to gum Arabic both in its physical and its chemical properties, and which swells and divides in water, so as in part to pass through a filter. The insoluble part of tragacanth is, according to the same authority, a mixture of starch and lignin, which has nothing in common with bassorine. Decandolle suggests that the insolubility and swelling of tragacanth in water may arise from the gummy matter being contained in cells.

Mucilage of tragacanth is precipitated by alcohol, subacetate of lead, protochloride of tin, protonitrate of mercury, and infusion of galls. Oxalate of ammonia indicates the existence of a calcareous salt.

Physiological effects.—Tragacanth is emollient, demulcent, and nutritive.

Uses.—The *powder* of tragacanth is used rather as a vehicle for active and heavy medicines, than on account of its own

proper effects. Mixed with gum Arabic and starch, it constitutes the *compound powder of tragacanth* of the Pharmacopœia. *Mucilage of tragacanth* may be employed as an emollient in irritation of the mucous membranes. It is likewise used for the suspension of other substances.

Mucuna pruriens: Cowhage.

This plant, called by Linneus, Dolichos pruriens, by Persoon, Stizolobium pruriens, is a native of the East Indies, and perhaps also of the West Indies. Its root is perennial and fibrous; its stem is herbaceous and climbing, rising to a considerable height by twisting round the neighbouring trees. The leaves are ternate, stand upon long foot-stalks, and are placed alternately at the distance of a foot from each other. The papilionaceous purple flowers are in racemes. The fruit (called in the shops *siliqua hirsuta*) is an oblong pod, shaped like the letter *f*, four or five inches long, covered with brown bristly hairs (the *setæ siliquæ hirsutæ* of the shops), and containing from four to six seeds, of a brownish colour. In the Linnean classification the plant belongs to class *Diadelphia*, order *Decandria*.

The officinal part of the plant is the hairs of the pod. They have been celebrated for their anthelmintic properties. The best mode of exhibiting them is in treacle, syrup, or honey. The quantity of hairs should be sufficient to give the syrup, or treacle, the consistence of honey, or of an electuary; and of this mixture a tea-spoonful may be given to children, and a table-spoonful to adults: this dose should be taken twice a-day—namely, at going to bed, and in the morning, an hour before breakfast. Chamberlaine says it usually operates more effectually where a gentle emetic has been premised. After continuing the electuary for three or four days, a brisk purgative of jalap, or senna, should be taken, which will in general bring away the worms. This remedy has been principally celebrated for the expulsion of the large round worm (Ascaris lumbricoides), and the small thread-worm (Oxyuris vermicularis). It is not equally serviceable against the tape-worm.

The action of the hairs is thought to be mechanical—that is, they are supposed to pierce and torment these parasites, and thereby to oblige them to let go their hold. In support of this explanation, Mr. Chamberlaine tells us he sprinkled some of the hairs in a calabash full of very large round worms (Asearis lumbricoides), and that in a little time the animals began to writhe and twist about, evincing thereby extreme torture. On examining them with a magnifying glass, the hairs were found sticking loosely in various parts of their bodies.

The intolerable itching caused by the contact of these hairs with the skin, is also referrible to their mechanical operation. Their want of action on the internal coat of the intestines is ascribed to the mucous secretion which defends the subjacent membrane from injury. In one case, diarrhœa followed the use of a very large dose of the electuary, and in another instance enteritis came on, after taking this preparation once; but it is not certain that these were the consequences of the operation of the hairs.

Mucuna urens.

This is a native of the West Indies. The hairs on the outside of the pods are used as a vermifuge, like those of the last mentioned species. The pods are distinguished by their transverse lamellæ. The seeds are called *Yeux bourrique*, or asses' eyes.

Butea frondosa.

It is probable that this tree yields one kind of Catechu, termed, by the French, "*Cachou en masse*," or "*Cachou lucide*." The grounds for this opinion are, 1st, that from natural fissures and wounds made in the bark, there exudes during the hot season an astringent juice, which soon hardens into a ruby coloured, brittle, astringent gum, which has been confounded with kino; 2dly, that the kind of Catechu before alluded to, is imported enveloped in leaves, which Professor Guibourt has ascertained to be those of Butea frondosa; and lastly, that this kind of Catechu is not obtained from either Acacia Catechu or Nauclea Gambir, since the astringent extracts of these trees possess very different physical properties, as will hereafter be shown. In deciding on the validity of these circumstances, we ought also to take into consideration the fact that the Butea being a common tree in India, and its leaves being large, they might be employed to envelop the extract of other trees, whose leaves were not sufficiently large for the purpose.

I propose to notice all the varieties of Catechu when we speak of the tree mentioned in the Pharmacopœia as yielding Catechu—namely, Acacia Catechu.

Butea frondosa is a middling-sized tree, common in Bengal and in the mountainous parts of India. The leaves are alternate, petiolated, ternate, from eight to sixteen inches long; the leaflets are emarginate, or rounded at the apex, the pair obliquely oval, the exterior one obovate. The papilionaceous flowers are in terminal racemes; their colour is deep-red, shaded

with orange and silver-coloured down. The legume is pedieelled and pendulous.

Fig. 166.—*Butea frondosa.*

In the Linnean classifieation, Butea belongs to class *Diadelphia*, order *Decandria*.

Pterocarpus santalinus.

This tree is a native of Ceylon and Coromandel. It belongs to elass *Diadelphia*, order *Decandria*, in the Linnean classification. Its leaves are ternate, with subrotund smooth leaflets; the flowers are in axillary racemes.

The wood of the stem is the *red saunder's wood*, the *lignum santali rubri* of the shops. It is imported in angular billets, blackish externally, but of a blood-red colour internally: it is compact, heavy, and of a fibrous texture.

The colouring matter of the wood is of a resinoid nature, and is termed *santalin*. It is hardly soluble in cold water, more soluble in boiling water; very soluble in alcohol, æther, acetic acid, and alkalies. It is almost insoluble in the fixed and volatile oils; the volatile oils of lavender and rosemary excepted.

This wood is employed in medieine only as a colouring agent. Thus it is one of the ingredients of the *compound tincture of lavender*.

Pterocarpus Draco.

This tree is said to be the souree of what has been termed Ameriean or Carthagena Dragon's blood.

Pterocarpus erinaceus.

This plant is erroneously inserted in the London Pharmacopœia, as the source of the kino of the shops. Kino is now brought to us from Amboyna; whereas this tree is a native of Senegal. In some works there is an Afriean kino described, which is said to be the produce of this species of Pteroearpus.

In the warehouse of an old drug firm in London, I met with a substance marked *gummi rubrum astringens*, and which I was told formerly fetched a very high price. It is probably the *gummi adstringens gambiense* of Fothergill, and which Murray ealls kino. I sent speeimens of it to Professor Guibourt, who has deseribed it as *Gomme astringente de Gambie*. It eonsists of small elongated tears, having an astringent taste,—externally blaekish, with fragments of bark adhering: if small pieees be examined by transmitted light, they are observed to be ruby red. It is partially soluble in water, and appears to be a mixture of a gummy with a red astringent juiee. It is probably the produce of Pteroearpus erinaceus.

SUB-ORDER: SWARTZIEÆ.

None of the plants of this sub-order yield any pharmaeological agents; and their medieinal properties are but little known.

SUB-ORDER: CÆSALPINEÆ.

This is an important tribe, and contains several plants deserving of notice. To it belongs

Ceratonia Siliqua.

This is the *Carob tree*, or *St John's Bread*, a native of the south of Europe and of Asia. Its leaves are abruptly pinnate, its leaflets oval and obtuse. The flowers are racemose and small; the fruit is an indehiscent legume, four or five inches long, an inch broad, of a brownish-grey eolour, and containing several seeds.

Fig. 167.—*Ceratonia Siliqua.*

It belongs to class *Polygamia*, order *Triœcia*, in the Linnean arrangement. The pods contain extractive, gum, sugar, tannic and gallic acids: they have been used as fodder for horses. The tree received its name, St. John's bread, from a supposition that the so-called wild honey on which St. John the Baptist fed, was the pulp of these pods. Moreover, it has been suggested that the shells of the pods might be the husks which the prodigal son desired to partake of with the swine.

ON THE

POWERS ON WHICH THE FUNCTIONS OF LIFE IN THE MORE PERFECT ANIMALS DEPEND,

AND ON THE

MANNER IN WHICH THEY ARE ASSOCIATED IN THE PRODUCTION OF THEIR MORE COMPLICATED RESULTS.

By A. P. W. Philip, M.D. F.R.S. L. & E. &c.

[From the Philosophical Transactions, with large additions *, communicated to the Medical Gazette by the Author.]

[Concluded from page 933.]

Of the manner in which the Powers of Life are associated in the production of their more complicated results.

In order to ascertain the seat of the power on which muscular contractility depends, it was necessary, in an early part of this paper, to enter on the relation which subsists between the muscular and nervous systems; and it appears from what is there said, that the nervous influence, whether in its effects on the muscles of voluntary or involuntary motion, stands only in the relation of a stimulus or directly debilitating power to the muscular fibre, according to the manner in which its organs are impressed; a result, I may observe in passing, peculiarly in accordance with all the other facts which have been stated respecting the nature of that influence, because the same observation, we shall find, applies to all the agents of inanimate nature which are capable of influencing the muscular fibre. For a similar reason it was necessary to point out the independence of the nervous on the sensorial power.

The relation which next demands our attention is that which subsists between the organs of the nervous influence and the living blood.

The first thing which here strikes us, is, that the blood-vessels and nerves uniformly accompany each other; from which we are led to infer that they co-operate in functions of very general necessity.

The powers of the nervous system, properly so called, we have seen, are all of a chemical nature. Of this nature, therefore, must be all processes in which they immediately co-operate. It is evident, that where such powers are employed, to render them efficient, materials must be provided on which they may operate; and there must also, of course, be means by which these materials are duly exposed to their action.

The materials we find in the blood; the means, employed for the purpose of duly exposing them to the action of the nervous influence, in the capillary vessels, on which the minute extremities of the nerves (which we know, from numberless observations, are those parts of the nervous system by which its powers are immediately applied in the functions of secretion and assimilation, as well as the maintenance of animal temperature, and the excitement of the muscular fibre,) are distributed. As we find from experiments above referred to, that the central are the only parts of the nervous system properly so called, employed in the formation of the nervous influence, it appears from numberless observations that the extremities of the nerves are the only immediate organs of its powers in all its functions.

The motion of the fluids in the capillary vessels, as appears from many experiments related in the Philosophical Transactions for 1815 and 1831, and my Inquiry into the Laws of the Vital Functions, depends on a power which resides in themselves, in no degree depending on the power of the heart or arteries, except as far as is necessary for the due supply of blood to the latter, which form the reservoirs, from which the capillary vessels draw their supply. When, in the newly dead animal, a ligature is thrown round all the vessels attached to the heart, and this organ is removed, the motion of the blood in the capillaries continues unimpaired, and only fails in proportion as the supply from the large arteries fails*; the cause of the emptiness of the latter some time after what we call death.

By such means the materials on which the nervous influence operates are supplied and presented to it; and the means of supply, namely, the power of the heart and arteries, as well as that of the capillary vessels themselves, being, as we have seen, under the immediate influence of the same power which effects the chemical changes†, the supply is proportioned to the demand under the various conditions of the ever-changing functions; and under the same influence are the means of removal, whether of secreted fluids or solid parts become unfit for the purposes of life. Such are the circumstances above referred to, which

* The additions were also intended for the Philosophical Transactions, but were too late for insertion in the new volume.

* See a paper On the Powers of Circulation, in the Philosophical Transactions for 1831, republished in my Inquiry into the Nature of Sleep and Death. See also my Inquiry into the Laws of the Vital Functions, Part II.

† See experiments detailed in the Philosophical Transactions for 1815 and 1822, and my Inquiry into the Laws of the Vital Functions, Part II.

render it necessary that the muscles, whether directly or indirectly, employed in these functions should be subjected to the same power on which depend the functions of secretion and assimilation, namely, all muscles of involuntary propulsion, that is, with a very few exceptions, all muscles of involuntary motion.

It appears from some lately ascertained facts* that the secreted fluids are formed from the blood while still in its vessels, and not in the act of their separation by the secreting organs. That such must necessarily be the case appears from what has been said. The act of separation must be posterior to the changes effected by the chemical powers of the nervous influence. It is only while the blood is still in its vessels that it can in its entire state, or only mechanically divided by the diminishing size of the vessels, (a division which, taking place in every secreting organ, we must regard as necessary to its function,) be exposed to their operation; and we have reason to believe that it is only as the due changes have been effected, that is, only as the secreted fluid has acquired its due properties, that it applies the due stimulus to the particular vessels by which it is discharged: on the same principle that the due action of the intestines, by which they discharge their contents, is not excited if these contents have not acquired their due properties by the chemical processes which take place in the stomach and duodenum. Thus we have reason to believe that all secretions are formed in the circulating fluids, and are separated by the different secreting organs, in consequence of the action of the secreting vessels of each of these organs being excited only by the fluid which it is their function to convey.

Such are the nature and functions of the nervous power, and its relations to the muscular power and the powers of the living blood.

When we turn to the sensitive system we find ourselves in a new world. Here voltaic electricity, which we so successfully substitute for the nervous influence, can do nothing. The immediate organs of the sensorial power, we have seen, are as it were hedged in and defended from contact with any of the agents of inanimate nature.

On the one hand, we find the nerves of sensation, which so far partake of the nature of the external world that they are capable of receiving and propagating impressions from its agents, but in all other respects are allied to the organs with which they are associated. By their vital powers they influence the immediate organs of the sensorium, and the functions thence resulting are the effects of one vital organ influencing another, and that by its vital properties alone; for it is evident that the properties operating here have nothing in common with those of any of the principles of inanimate nature. In the results consequently, we have seen all analogy with the phenomena of these principles, for the first time, lost; and necessarily so, none of the properties of the external world being immediately employed in their production.

The nerves of sensation, it appears from what has been said, convey not the nervous influence properly so called. The influence they convey is of a nature essentially different from that by which the muscles are excited, and the functions of secretion and assimilation maintained. They sufficiently partake of the nature of the sensorial organs to be capable of directly impressing them, and thus the latter receive all their impressions whether originating from without or within our own bodies.

On the other hand,—that is, that the sensorial organs may, without contact with any of the agents of the external world, impress those agents,—a more complicated machinery is required. The various nerves of sensation are the only means required for conveying impressions to these organs; but so simple an apparatus is not sufficient to convey to, and impress on, the materials of the external world, the dictates of volition. The powers of the nervous system are here called into operation by the sensorial powers, to which they are subjected; for it appears from many experiments, detailed in the Philosophical Transactions for 1815, and in my Inquiry into the Laws of the Vital Functions, that as the muscular is independent of the nervous power, but subjected to its influence, the nervous is independent of the sensorial power, but, in like manner, subjected to the influence of this power. In the case before us the nervous, influenced by the powers of the sensorial organs, supply a certain set of nerves with the stimulus which excites the muscles of voluntary motion, the immediate agents by which the materials of the external world are impressed.

I have had occasion to refer to the great variety of the phenomena of life, as one cause of their apparent obscurity. Such is their variety that we are at first view lost in attempting any arrangement or even enumeration of them. An essential step towards their arrangement, as appears from what has been said, is their division into those which are the immediate results

* See a paper by MM. Prevost and Dumas, Ann. Chim. et Phys. tom. xxiii. p. 90, et seq.; and Mr. Phillips's paper on the Secretion and Uses of the Bile, read at the Royal Society, Dec. 20, 1832, of which an abstract is given in the Proceedings of the Royal Society, vol. iii. p. 160.

of the cooperation of the principle of life with the principles of inanimate nature, and those which have no immediate dependence on the latter powers; for all our functions mediately or immediately depend on the operations of the agents of inanimate nature. All are more or less directly excited by impressions originating in their agency.

The most purely sensorial functions, our pleasures and pains, are as dependent, though more remotely, on the excitement maintained by them, as the functions of the organs immediately impressed by them. Have not the excitements of memory, for example, as much originated in their impressions, as their more direct effects on the part impressed? And when the nature of our bodies and the circumstances in which we are placed are duly considered, what other result could be expected? Our organs, being composed of the same materials as the world which surrounds us, can only be directly influenced by agents of their own nature; and from that world, and by the medium of those organs, all the materials, not only of our acquired knowledge*, but of our enjoyments and our sufferings, are derived.

And as on the one hand, all our functions are more or less immediately excited by impressions made by the agents of the external world on organs composed of materials of their own nature, on the other, we have no power of influencing them, but through similar means. The only means of exciting our mental functions are the impressions of those agents on the organs of sense, and our only means of operating beyond our own bodies are through our organs of motion. Even when by our mental powers we influence those of other sentient beings, it is as much, though not so directly, by impressing the agents of the external world by the latter organs, as when we raise a weight or throw a stone.

Such is the general outline of the vital and sensitive systems; and the manner in which the various powers of the living animal are related in the formation of these systems. By the foregoing means, the nervous power maintains the vital functions properly so called; and the sensorial power is brought to cooperate with the powers of inanimate nature, powers which have no properties in common.

The functions by which these objects are effected include the more complicated functions which belong to the individual systems. But the most complicated remain to be considered—those functions in which both systems so co-operate that they can hardly be said to belong to either. Before entering on them, however, it will be necessary to make some observations on the differences of the laws which regulate the two systems, and consequently essentially modify all the functions in which they co-operate.

It appears from the facts adduced in my paper on the Nature of Death, published in the Philosophical Transactions for 1834, that the vital and sensitive systems obey very different laws, the difference depending on the vast difference in the nature of the sensorial and nervous powers, the leading powers which pervade all their departments, and to which all their other powers are subservient.

These other powers, it appears from what has been said, are the same in both, namely, the muscular power and the powers of the living blood, and, in the sensitive system, the nervous power itself; for in this system all the other powers of the living animal are directly subjected to the sensorial power, while none of the powers of the vital system have any direct influence on it, their influence on the sensorial power being through the medium of its organs, the structure and well-being of which immediately depend on the vital powers.

In other respects also the laws of the two systems essentially differ. Nor will these differences surprise us, when it is recollected, as appears from the facts which have been stated, that while the leading power in the vital system is one of those powers which operate in the external world, that of the sensitive system not only possesses no properties in common with the agents of inanimate nature, but depends on a set of organs unapproachable in their healthy functions by any such agents.

When the facts adduced in the paper just referred to, and that on the Nature of Sleep published in the Philosophical Transactions for 1833, are duly considered, it will appear that a principal cause of difference in the laws of these systems depends on the difference of the laws of excitability in the organs of their leading powers. In those of the leading power of the sensitive system, all degrees of excitement are followed by a rapid proportional exhaustion of excitability; so that the effect of the usual stimulants of life for a few hours, renders a state of inactivity essential to the maintenance of their health: while the exhaustion of the excitability of the organs of the leading power in the vital system by those stimulants, is the operation of many times as

* We are born with the knowledge which is immediately essential to our existence. The infant knows as well how to suck and how to breathe as the adult, and these are as much acts of volition as those which are the results of experience. See my paper on the Nature of Death.

many years, the one determining the recurrence of sleep, the other the natural duration of life.

The properties of the muscular fibre, and the relations it bears to the other organs, admirably adapt it to cooperate with the leading powers of both systems. This fibre, it appears from many of the phenomena of life, experiences no sensible exhaustion from moderate excitement*. In health its excitement in the vital system is always such; and it is evident from what is said in the papers just referred to, that, were not this the case, the continuance of life would necessarily be of very short duration. We know from the phenomena of disease that even in slight degrees of exhaustion of the muscular fibre employed in the vital system, its due excitability is restored with difficulty; and that no great degree is necessary to prove fatal. That its due excitability may be restored, it must still retain such a degree of it as is necessary to the continuance of the vital functions, however feebly performed. Under such circumstances, if the operation of the offending cause be removed, the organs of those functions gradually though slowly, in proportion to the degree of exhaustion which has taken place in the muscular fibre employed in the vital functions, and the organs of the nervous power properly so called, regain their due excitability.

The moderate effect and uniformity of the stimuli which, in health, excite the muscular fibre in the vital system, secure it against sensible exhaustion. It is otherwise in the sensitive system, because there this fibre is often exposed, in the ordinary functions of life, to a stimulus exceeding in its effects the limits of moderate excitement; but the exhaustion consequent on this excitement is here attended with little inconvenience, because the organs of the only stimulus which excites it in this system suffering a corresponding exhaustion, its stimulus is withdrawn; and thus it is allowed to recover its excitability, its continued action here not being essential to the continuance of life, and means being provided in the healthy functions of the system for the restoration both of its excitability, and that of the organs which supply the stimulus which excites it.

In those, in whom, from habits of dissipation, extreme labour, or other causes, the excitability of the vital system is to a certain degree exhausted, but who, as they approach middle life, cease to be exposed to such causes, and during that portion of life, that is from thirty to fifty or fifty-five, feel little inconvenience from the effects of their early habits, there still being in the vital system sufficient excitability for the usual functions of life; after this period, when the defect of excitability begins to be felt sooner or later by all, feel the effects of its expenditure which had been so profuse in early life: many striking instances of which I have witnessed. Similar observations apply to long protracted illness, severe misfortunes, or any other cause which at any period of life in a great degree, and for a considerable length of time, tend to exhaust the excitability of the vital system, although for a certain time the individual may enjoy his usual health after such causes have ceased to operate*.

The organs of the leading power in the vital system, as appears from the facts stated in my paper on the Nature of Death, possess at birth a high degree of excitability, a degree beyond that proportion which constitutes the firmest state of health—the cause, as there pointed out, on which the growth of the body appears to depend, and the source of many of the most fatal diseases of infancy—which is by the operation of the usual stimulants of life gradually reduced till it bears a due proportion to those stimulants, by which the powers of the constitution are confirmed. At length from their continued operation the fault is a defect, not a redundancy, of excitability, to which every day necessarily adds, till they can no longer excite the organs on which that power depends; for in every instance the immediate cause of absolute death, which is very different from what we call death, is the failure of that power†. And here as there are no means in the constitution, as in the case of the organs of the leading power in the sensitive system, of restoring the excitability of its organs, they at length finally cease to be excited. Thus it is that in almost all cases of great longevity we find that there has been little exposure during life to powerful causes of exhaustion of either body or mind, for we have seen that the nervous is immediately under the influence of the sensorial power; and that such instances are most frequent in the colder of the temperate climates; heat, on the one hand, tending to exhaust excitability, and extreme cold, on the other, to render us less capable of excitement.

In considering the laws of excitability it is necessary to bear in mind an essential property of all those agents which are capable of calling it into action, and

* My papers on the Nature of Sleep and Death.

* See what is said of the excitability of the two systems in my papers on the Nature of Sleep and Death.

† My paper on the Nature of Death. Philosophical Transactions for 1834.

which has obtained less attention than its great importance in the treatment of disease demands. There is no agent capable of influencing either of the two systems into which the functions of the living animal arrange themselves, whether it be such as makes its chief impression on the mind or body, which is not capable of acting either as a stimulating or directly debilitating power according to the degree in which it is applied. There is none which may not be applied in so small a degree as to act as a stimulant, and in so great a degree as to act as a directly debilitating power. The most depressing passion in a comparatively small degree will excite, the most exciting in an excessive degree directly debilitate; and the same stimulus by which either the nervous or muscular fibre is directly excited, will by its excessive application directly deprive it of power. I know of no exception to this law. All medicines within a certain range, excite, and unless the excitement exceeds the degree which produces no correspondent depression, (for such a degree of excitement, we have seen, is compatible with the laws of the vital though not with those of the sensitive system*,) it acts as a permanent tonic. All, beyond their stimulant range, act as directly, and although within that range, if of a certain intensity, as indirectly debilitating powers with respect to both systems†.

Thus it is that tonics never produce much immediate excitement. They have little of the effect of mere stimulants. Their peculiarity is in the permanence, not the power, of their stimulant effect; and on this both their good and bad effects depend; and thus also it is, that a medicine, debilitating in the usual dose, in a lessened dose acts as a tonic. This I have found to be, in a striking degree, the case in the instance of mercury ‡, by which means we are enabled permanently to relieve a class of diseases which have hitherto resisted all our means. I have been at much pains to ascertain the largest dose of mercury which acts as a permanent tonic; that is, provided it is not allowed to produce salivation, which, for evident reasons, however produced, is itself debilitating, and which the following doses are as capable of as larger ones, and under certain circumstances more so*; but from their use it never suddenly supervenes; there is always, under whatever circumstances, sufficient warning to prevent it by discontinuing the minute doses for one or two days; nor, indeed, do any of the other bad effects of a course of mercury attend their use. They neither open the skin as a course of mercury does, nor does the sudden closing of the skin, under their use, from cold or any other cause, ever do harm, the quantity of mercury at any one time in the habit never being such as to cause inconvenience to whatever part directed. The doses here referred to, I found, in most constitutions, to be the twentieth part of a grain of calomel, or half a grain of blue pill, according as best suits the constitution, repeated three times in twenty-four hours. These doses possess about the same power, the former perhaps being rather the more powerful. Many circumstances detailed in my treatise on these doses must be attended to in order to secure their good effects.

We have hitherto been employing mercury in its debilitating doses only; that is, doses which either produce a directly debilitating effect, or such excitement as, in the vital system, is followed by a corresponding depression; and hence has arisen the prepossession against it, which, however, such are its healing powers, has not prevented its being more generally employed in this country than any other medicine; in which the best informed countries of Europe are gradually following our steps.

It is evident from many facts, stated in my papers on the Nature of Sleep and Death, that each of the foregoing systems is a whole, which cannot be influenced in any one part without a tendency to be affected in all others; a property which perhaps more than any other influences the progress of their deviations from the healthy state; for every part more or less feeling the change effected in any one, if there be any from accidental causes more liable to disease than the rest, this part particularly feels the cause which operates on all; and, as I shall soon have occasion to point out more particularly, is even the means of diverting its effects from every

* My paper on the Nature of Sleep in the Philosophical Transactions for 1833.

† See what is said on this subject in my treatise On the Influence of Minute Doses of Mercury in restoring the Functions of Health, and my Gulstonian Lectures on the more obscure affections of the Brain, also in the recapitulation at the end of this paper. All my treatises, to which I have occasion to refer, are more or less founded on the principles here recapitulated; and consequently in them more or less copious references to the facts on which these principles rest, became necessary. In order to arrive at the conclusions of the present paper, it was necessary to state the whole of those facts with their various bearings, which I have done in as concise a manner as the requisite perspicuity appeared to admit of. In the less familiar parts of the subject, it requires some care to avoid being misunderstood.

‡ See my Treatise on the Effects of minute doses of Mercury in restoring the Functions of Health.

* Ibid.

other part. Thus it is that diseases of continuance often become complicated, and that an affection, attended with little risk in the part first impressed by the offending cause, may become formidable by its secondary effects.

The power which operates here has been termed the sympathy of parts, the effects of which I have considered at length in a treatise on the more obscure diseases of the brain, being the Gulstonian Lectures delivered at the College of Physicians in 1835. I am now, after referring to its more prominent effects, to consider the nature of this function, and the powers on which it immediately depends; which will lead us to the last part of the subject of this paper,—the means by which the most complicated functions are effected.

As it appears from the experiments above referred to that the organs of the sensorial and nervous powers, the leading principles of the two great systems, the functions of which comprehend all the functions of life, although both belonging to the brain and spinal marrow, are distinct sets of organs; the one set being confined to a comparatively small portion of these organs, the other distributed through the whole of them, from the uppermost surfaces of the brain and cerebellum to the lowest portion of the spinal marrow; and as numberless observations evince that the immediate cause of sympathy exists in the central organs alone*, it follows that these systems must have different centres of sympathy, that if the different parts of each system sympathize, it cannot be through the same centre.† Now it appears from the phenomena of disease, compared with the results of the experiments just referred to, that each of the centres of these systems is often influenced with so little disturbance to the other, that disease of either system, especially when of a chronic nature, often spreads to distant parts of the system in question, without much affecting the other; a favourable result in the sensitive system, because it is only in proportion as the organs of the vital system are implicated that life is endangered; but in the vital system the most fruitful of all causes of obscurity, and that in diseases of the most formidable nature, to which many have fallen, and still fall a sacrifice; for so ill supplied are some of the vital organs with nerves of sensation, that in them diseases of sympathy often make a fatal progress without the state of the part originally affected having attracted attention, and without its restoration, that of the part secondarily, but more prominently, affected is impossible*. Thus also it is,—that is, in consequence of the one system often suffering with little disturbance to the other,— that extreme suffering not unfrequently continues for years without materially impairing the functions of life, the organs of suffering belonging to the sensitive system; while in other instances immediate danger presents itself with so little previous suffering, that even the medical attendant is unprepared for it.

The latter evil can only be obviated by a careful study of the laws of sympathy in the vital system, and particularly by ascertaining what organs are most inclined to be affected by what others; for although the function of sympathy is, like other functions, influenced by causes peculiar to the individual, it is in a great degree regulated by principles which more or less prevail in all†.

From the facts just referred to we easily perceive the cause of the sympathy by which every part of each of the foregoing systems is capable of influencing every other. Each is regulated by a leading principle, and in consequence of this, under an influence by which the affection of any one part tends to affect all others; because as all parts of each system both influence this principle, and are influenced by it, it necessarily follows that all must, through it,—that is, through the central organs of each system, which alone are the immediate organs of its leading principle,—feel the affections of each. Such, together with the laws I am now to consider, is the source of the function to which the term sympathy has been applied, a principle, as I have just had occasion to observe, which perhaps more extensively than any other regulates the course of disease.

As each of the preceding systems is formed into a whole by its leading principle, the relation which these systems bear to each other have a similar effect with respect to the whole frame; for the affection of any one of its parts tends more or less, though much less powerfully than in the individual systems, to influence all

* My Gulstonian Lectures.
† Ibid.

* The internal water in the head of children, for example, has till within the last thirty years, been almost uniformly fatal, having been treated as an original affection of the brain. Dissection having now proved it to be a secondary affection depending on the state of the liver, there are few serious diseases in which the treatment is more uniformly successful, if it has not been allowed to arrive at its last stage. The original affection, which does not betray itself by any prominent symptom, being removed, its consequences yield to the means, which are powerless while it continues to operate. Other affections of the head, certain forms of pulmonary consumption, and many other diseases, might be adduced as illustrating the same principles. Ibid.
† My Gulstonian Lectures.

others. The means by which the relation between the sensitive and vital systems, and consequently the most complicated functions, are maintained, we are here to consider; to some of them I have already had occasion to refer.

We have seen that the nervous power properly so called, the leading power in the vital system, is immediately under the influence of the sensorial power, the leading power in the sensitive system, and constitutes the medium through which all that part of our intercourse with the external world, by which the latter power influences it, is maintained. This therefore is the first bond of connexion to which I shall refer between the sensitive and vital systems. The second is the means by which the organs of both systems are maintained; for, as I have already had occasion to observe, the sensitive has a dependence on the vital system, for the maintenance of its organs, as the latter, we shall find, has a more remote dependence on the former, for the maintenance of its organs; the connexion thus established between them being increased by both systems equally depending for the maintenanee of their organs on the muscular power and the powers of the living blood; both of which are in their turn subjected to the nervous, and the former certainly, and the latter, we have reason to believe, through the nervous, also to the sensorial power.

The sympathy which prevails through all parts of each system also contributes to the influence of these systems themselves on each other; because the state of the parts secondarily affected in consequence of the power of sympathy, more or less influences both systems, all parts being more or less supplied with nerves from both.

But we have sufficient evidence in the symptoms of disease, compared with the results of the experiments referred to, that in the phenomena of sympathy, as in the instances just pointed out, the central organs of the sensitive directly influence those of the vital system. A sympathetic pain it is well known referred to any part will at length produce actual inflammation of the part. Now while the pain alone exists, we know that the derangement which produces it is in the central organs alone of the sensitive system, and in no degree in the part to which it is referred; and we also know from the facts which have been stated, that there is no channel through which this derangement can influence either the vital nerves or the vessels of the part, but through the central organs of the vital system.

When the affection of the nerves or vessels of the part is the original disease it influences the central organs of both systems by the actual disease of the part, every part being supplied with nerves belonging to both systems; but in the former case there is no other channel of communication than that just referred to. The central organs of the sensitive, having no direct power over either the vital nerves or the vessels, can only influence them through the central organs of the vital system. Thus arises a double bond of connexion between the two systems, the central organs of the sensitive system directly influencing those of the vital system, and the nerves of the sensitive system being necessarily influenced by all deviations from a state of health in whatever part, for all parts may be affected through the central organs of the vital system, the degree to which the effect in the sensitive system takes place being proportioned to that in which the part is supplied with nerves of sensation. As the central organs of the sensitive, directly influence those of the vital system; the latter, through the extremities of the different nerves with which the two sets of organs are associated, influence the former. Hence we have just seen the fatal obscurity of many diseases of those vital organs, which are ill supplied with nerves of sensation; and as the more chronic the disease, the less it disturbs the sensitive nerves, it is in the more chronic cases that the obscurity is greatest, and consequently attended with the greatest risk.

Different parts of the central organs of the sensitive system correspond to different parts of the general frame. This is perhaps sufficiently proved by our being enabled by experience to refer our sensations to the seat of the cause which excites them; but in many of the inferior animals, where both the brain and spinal marrow partake of the organs of the sensorial power, it may be proved by direct experiment, because after the removal of the brain we find the sensorial power lost only in those parts which derive their nerves from that organ.

But how comes it that the central organs of the vital system also have a peculiar relation to certain parts of the general frame, the nerves associated with these organs conveying, as appears from what has been said, their combined influence, which is bestowed alike on all vital organs?

It is a law of the animal economy, amply illustrated by the phenomena of disease, that when an impression influencing the system generally is, by previous debility or any other cause, directed to a particular part, its operation is diverted from all others. Now it appears from a thousand

phenomena that the suffering of the sensitive system, referred to any particular part, is sufficient, under certain circumstances, in consequence of the influence of the central organs of the sensitive, over those of the vital system, and, through the latter system, over all parts of our frame, to direct to that part the effects of derangement excited in this system. Thus even a diseased organ will often regain its healthy state, when the disease has spread to another, particularly if in the latter, it takes deeper root, if I may use the expression. It is a daily occurrence for a disease of function to be finally removed by a disease of structure being established in another organ. Hence the good effects of artificially exciting disease in external parts to relieve those more immediately essential to life; and the still more salutary effect, when the laws of our frame themselves produce the same effect, because here it is the uninfluenced result of those laws, whereas in the former case their tendency is constrained by artificial means. Thus for example it is that the inflammation of a gouty joint or other external disease often relieves the derangement of a vital organ, and that artificially repelling this effort of the constitution to save a vital part, has so often proved fatal.

On the facts that the central organs of the vital system directly influence the functions both of the vital nerves and of the vessels of every part, while those of the sensitive system have no direct influence on either, many of the phenomena of disease depend; because it is only in proportion as these nerves and the vessels of the part are influenced, that any disease of the part itself exists, and consequently that there is any tendency to derangement either of function or structure in the part; of function alone if the nerves alone are affected, of structure also as soon as the vessels partake of the disease. Hence it is that the tendency to change of structure, except where it takes place by imperceptible degrees, is, *cæteris paribus*, always proportioned to an inflammatory tendency which may be detected in the part, this tendency being the first indication that the vessels partake of the disease; and hence the importance of carefully watching and checking its approach, if the part be one essential to life, in all cases of deranged function of, or even of painful sensations referred to, particular parts; for the long continuance of either may through the foregoing channels excite the most formidable diseases in vital parts, which will generally be obstinate in proportion to the length of time the previous symptoms have lasted. The longer continued the habit of disease of whatever nature and whatever part, the more obstinately the parts concerned retain the morbid action.

Extensive as the foregoing relations of the vital and sensitive systems are, they are not the only ones. To determine the whole of them it is necessary to review the functions of the more perfect animals, and in particular correctly to ascertain the line of distinction between those of the two systems; in order to ascertain whether there be any beside those just pointed out in which they cooperate, and which consequently contribute to their dependence on each other.

I made many experiments with a view to draw the line of distinction between the vital and sensitive functions; and that the result might be the more certain, the attempt was made by two sets of experiments, conducted on different principles. By the one it was attempted to ascertain what functions remain when the sensorial power is withdrawn; by the other, what functions fail with the failure of the nervous powers; and the correspondence of the results of these sets of experiments tends to confirm the inferences from both*.

Much confusion had arisen from physiologists having neglected to ascertain this line. M. le Gallois, one of the most acute, soon found his difficulties from this cause such, that he was obliged to confess himself unable to proceed, and leave to his successors the task of removing them. He had adduced sufficient proof of the spinal marrow, to which the nerves of respiration belong, being capable of its functions independently of the brain; yet on the removal of a part of the brain, the medulla oblongata, respiration ceases. This difficulty he acknowledges he sees no means of removing, calling it "un des grands mystères de la puissance nerveuse, mystère qui sera devoilé tôt ou tard, et dont la découverte jettera la plus vive lumière sur le mechanisme des fonctions de cette merveilleuse puissance."

If the preceding facts be kept in view, it is evident without much consideration that none of the functions of the sensitive have any other dependence on the powers of the vital system, but for the due structure and wellbeing of their organs. The nature of the functions of the vital system here requires more consideration. They include respiration; circulation; those processes by which the secreted fluids are formed; those, namely the more immediately assimilating processes, by which our food is converted into the various organs of our bodies, and such parts of them as have become unfit for the pur-

* Inquiry into the Laws of the Vital Functions, Part II.

poses of life are separated and expelled, for all are in a state of change; and those by which the due temperature is maintained.

Does the sensitive cooperate with the vital system in any of these functions?

From the line of distinction, determined by the experiments just referred to, it appears that in one of them only is there such a cooperation.

I have in the last of my papers published in the Philosophical Transactions for 1829 considered at length the nature of respiration, and have, as far as I am capable of judging, adduced such facts as prove that the muscles employed in this function are, in the full sense of the word, muscles of voluntary motion. The first act in respiration is the impression made on the sensorium, the sensation excited by the want of fresh air in the lungs. We are enabled to supply it and remove the uneasiness, by exciting, through the nervous system properly so called, certain muscles subject to the will.

Respiration thus depending on the combined operation of both systems, is as effectually destroyed by a failure of the sensation which makes us will to inspire, as by that of the nervous or muscular power by which the will effects its object. Thus the difficulty of M. le Gallois disappears. It is true that the spinal marrow and its nerves are capable of their functions independently of the brain, and that the nerves which excite the muscles employed in respiration are supplied by the spinal marrow, but in this function it is an act of volition which excites them. They are quiescent till this act takes place. Hence it is that respiration ceases on the removal of the medulla oblongata, because by the removal of this part of the brain the power of sensation in all parts below the head and consequently of volition, as far as relates to those parts, is destroyed. Hence also the fact, above referred to, that the vital has a remote dependence on the sensitive system, independently of the means of obtaining nourishment, for the maintenance of its organs. If the muscles of respiration were not in the strictest sense muscles of voluntary motion, our powers of volition would in an essential respect be imperfect; for the due regulation of their action is essential in the formation of articulate sounds, the chief means by which our sensorial powers are enabled to influence those of other sentient beings. In many of the less perfect animals, respiration like circulation is performed by powers of involuntary motion, as in the still more imperfect, sustenance is obtained by the same means, the functions of the lowest class of animals thus in their nature approaching to those of the vegetable. In proportion as the animal ascends in the scale of being, the vital have a greater dependence on the sensitive powers; that is, in proportion as the latter powers improve, the former become more dependent upon them.

In the papers on the Nature of Sleep and Death, published in the Philosophical Transactions for 1833 and 1834, I have pointed out how much the functions of the more perfect animal are influenced by this peculiarity of respiration, the only vital function, properly so called, in which the sensorial power cooperates; a circumstance which more generally perhaps than any other, which is equally of a local nature, influences the phenomena both of health and disease. In this function therefore we find a powerful bond of connexion between the sensitive and vital systems, and one, as appears from the papers just referred to, of the most extensive operation.

Such are the means by which the frame of the more perfect animal is formed into a whole, and the function of sympathy and its other more complicated functions above enumerated effected. A powerful connexion is established among all parts of each of the systems into which the functions arrange themselves, depending on each being regulated by a leading power which influences every part of the system to which it belongs, and in its turn is influenced by every part of it: and these systems themselves are intimately related in consequence of the nervous, the leading power in the vital system, by means of the control which the organs of the sensorial power exercise over it, being employed in the accomplishment of many of the sensitive functions; and the sensorial power, the leading power in the sensitive system, being employed in one of the most important of the vital functions; by both symptoms not only depending for the maintenance of their organs on the same powers, but more or less directly on each other; by the powers common to both systems being under the influence of the leading principles of both; and by all affections of whatever part, whether original or sympathetic, necessarily influencing both its sensitive and vital nerves, and consequently the central organs of the systems to which they belong.

From the whole of the facts referred to in the preceding paper, the great outline of the laws which regulate the functions of the more perfect animal is derived. The parts of which it consists, from the complicated nature of the subject, being very numerous, it is necessary, in order to place it in a clear point of view, concisely

to recapitulate them; and as in the preceding paper, I commenced with the more simple, and was, by their intimate connexion with the more complicated powers, led to them; I shall in the recapitulation, that they may be viewed in both directions, begin with the more complicated, which by the same means will lead us to the more simple powers.

Beside the mechanical powers, of which the living animal evidently partakes in common with inanimate nature, it possesses, we have seen, four distinct powers, apparently peculiar to itself, having no direct dependence on each other, but each depending on the other three, for the maintenance of its organs; the sensorial, the nervous, and the muscular powers, and the powers of the living blood.

By these powers are maintained the two systems into which the various functions arrange themselves, the vital and sensitive systems, the object of the one being the maintenance of our bodies, of the other, our intercourse with the external world.

The organs of the sensorial power in man have their seat in the brain. They can be excited by no other means than the influence conveyed by the nerves of sensation, in the most extended sense of the expression, in every instance called into operation by impressions made on their extremities by agents which belong to inanimate nature, either existing within our own bodies, or making their impression from without; and, on the other hand, there are no means by which the sensorial organs can influence those agents but through the intervention of the powers of the nervous system properly so called. The nature of the sensorial power, we have seen, admits of no direct intercourse between its organs and the agents of inanimate nature, because none of the properties by which it operates have any thing in common with those of such agents; and as these organs can only receive impressions from the external world through the nerves of sensation, with which they associated, they can only impress the agents of that world through the muscles of voluntary motion, excited by the nerves associated with them. Thus it is necessary, as we have by direct experiment found to be the case, that the organs of the nervous system should be placed under the control of the sensorial power. Through the same channel, we have seen, this power also, in some of their functions, controls the muscles of involuntary motion; and we have reason to believe, although the point has not been ascertained by direct experiment, all the powers of the living blood. And such, as appears from facts above referred to, is its influence on the nervous, and through it, on the muscular power, and we have reason to believe on the powers of the living blood, that it can not only excite, but impair and instantly destroy all these powers, according to the nature and power of the causes which influence its organs.

The circumstance of the muscular, as appears from facts above referred to, being the moving power of the blood in the vessels as well as the heart, greatly extends the influence of those powers which control it, namely, the nervous power properly so called, and the sensorial power acting through it.

The only respects in which the sensorial power is related to the subject of this paper, are in the impressions it receives from the nerves of sensation, and the functions in which it co-operates with the nervous and muscular powers. Sensation and volition are the only sensorial powers employed in the maintenance of life.

While the organs of the sensorial power are thus capable of more or less directly influencing all the other organs of the living animal, they more or less feel in their turn, through the medium of the nerves of sensation, which, we have seen, convey an influence of wholly a different nature from that conveyed by the nerves associated with the organs of the nervous power properly so called, all changes effected in any part of our frame. By these means, this power constitutes the leading principle in the sensitive system, of which its organs form the central parts.

The organs of the nervous power properly so called, have their seat equally in the brain and spinal marrow, and throughout all parts of them; and are excited, on the one hand, by the direct influence of the sensorial power, and on the other, by agents influencing the vital organs throughout every part of the frame; all of which, as in the case of the impressions made on the nerves of sensation, whether existing in our own bodies or making their impressions from without, are agents of inanimate nature.

The immediate functions of the unaided nervous power are the excitement of the muscles of voluntary motion in all their functions, of the muscles of involuntary motion in some of their functions; and the immediate functions of this power in co-operation with the muscular power and the powers of the living blood, all the powers of both of which are directly subjected to its influence, are the formation of the secreted fluids, the maintenance of animal temperature, and the various more

immediately assimilating functions, — namely, the functions by which, on the one hand, our food is converted into our various organs, and, on the other, those parts of them which have become useless, are separated and expelled,—which renders it necessary that the muscles of involuntary motion as far as they co-operate in these functions, which with few exceptions include the whole of these muscles, should, as we have seen from direct experiment is the case, be under the immediate influence of the nervous power.

Neither the brain nor spinal marrow in the functions of the vital system acts through the other of these organs, as the brain is found to do through the spinal marrow in many of those of the sensitive system; each directly influencing every part.

The direct influence of the nervous power, it appears from what has been said, extends to all the functions of the system, with the exception of those of the sensorial power, which it only influences through other functions. It directly influences, and is directly influenced by, all the vital functions properly so called, and hence constitutes the leading principle of the system to which they belong, therefore termed the vital system, of which its organs form the central parts.

The circumstance of each of the foregoing systems being under the influence of a leading power, which is both capable of influencing and being influenced by every part of it, is the cause of that powerful sympathy which exists among all its parts, and which we have seen often essentially influences either system with but little disturbance to the other, on which many of the most important phenomena of disease depend.

The muscular power, which has its seat, we have seen, in the muscular fibre itself, and the powers of the living blood, which have their seat in the blood itself, perform subordinate parts. They are equally employed in both systems for the maintenance of their organs. The latter supplies the materials endowed with the principle of life on which the nervous power operates in the formation of the secreted fluids, the maintenance of animal temperature and the various more immediate functions of assimilation; while the former, to which the vessels as well as the heart owe their power, supplies the means by which these materials are duly exposed to the operation of the nervous power, by which their necessary changes are effected; that is, to the influence of the extremities of the nerves, by which the nervous power operates in all these functions, as well as in the excitement of the muscles; for as the brain and spinal marrow, as we have seen proved by direct experiment, are the only parts of the nervous system employed in preparing the nervous influence, the minute extremities of the nerves are the only immediate organs of its functions; as the extreme parts of the sanguiferous system, the capillary vessels, are the organs by means of which the blood is immediately exposed to its influence.

That the capillary vessels may be, as little as possible, influenced by adventitious causes in functions of such importance in the animal economy, we find on the one hand, as appears from experiments above referred to, that the motion of their blood depends wholly on their own powers, the larger arteries which depend for their supply of blood on the heart, being only the reservoirs from which they draw their supply; and that, on the other, they are not controlled by the nervous influence through the medium of the heart, but receive this influence directly from its source: and so correct are these positions, that even the removal of the heart, if effected without any considerable loss of blood, produces no immediate effect either on the action of the capillaries, or the control which the nervous power exercises over them.

Such are the individual powers of the living animal, their seat, the relation they bear to each other, and the manner in which their several functions are effected.

But the most complicated functions, it appears from what has been said, depend on the relations which subsist between the two systems themselves, into which the functions of all these powers are arranged.

They are related to each other, we have seen, by the nervous, the leading power in the vital system, in consequence of the control exercised over it by the sensorial, the leading power in the sensitive system, being employed in many of the functions of the latter; by the sensorial being employed in one of the most important of the vital functions, this peculiarity of respiration, for in no other of those functions is there any such co-operation, extensively influencing the phenomena both of health and disease; by both systems depending for the maintenance of their organs on the same powers, and more or less directly on each other; by the powers common to both systems, the muscular power and the powers of the living blood, being under the influence of the leading powers of both; and by all affections of whatever part necessarily influencing both its sensitive and vital nerves, and consequently the leading powers of both systems.

As the various parts of each system are

formed into a whole by all parts of each influencing and being influenced by its leading principle, so all parts of the animal body are formed into a whole, no part of which can be affected without tending more or less to affect all others, by the means just enumerated, by which these systems influence each other. Such are the foundations on which the laws of sympathy depend, a principle which, as I have endeavoured in a cursory way to point out, more than any other, influences the course of all deviations from a state of health.

The functions of all the powers of the living animal, we have seen, are mediately or immediately excited by organs belonging to inanimate nature. Our organs are composed of the same materials with the external world, and can only be immediately impressed by agents of their own nature. It is true that the sensorial functions are the results of one vital part acting on another, the sensitive nerves on the immediate organs of the sensorial power; but the impression these nerves convey is in every instance received from the agents of inanimate nature. Here both the agent and the organs impressed are of the same general nature, being composed of similar materials with our other organs. The peculiarity of the results depends on vital properties alone being employed in their production, whereas in all other functions of the living animal, the vital properties of the organ co-operate with the properties of the inanimate materials of which it is composed. Hence it is that its functions admit of being immediately excited by the agents of inanimate nature, which, having no properties in common with the only properties employed in the sensorial functions, cannot directly co-operate in their production; and hence, we have seen, the analogy, which all the functions of the living animal, with the exception of the immediate functions of the sensorial organs, bear to the operations of inanimate nature, and the total loss of all such analogy in the latter.

Every agent capable of exciting any of the functions of the living animal, we have seen, acts as a stimulant or directly debilitating power, according to the degree in which it is applied. In the sensitive system their stimulant effect is always followed by a proportional exhaustion of excitability; in the vital system, only when the excitement exceeds a certain limit. I speak in the latter case of a sensible exhaustion, an exhaustion beyond that produced by the usual stimulants of life, which, in the vital system, is too gradual to be perceived, and as far as relates to any particular stimulant employed within such limit, is so trifling that it may be safely overlooked. Hence it is that the vital system appears to possess an excitability which is not exhausted by stimulants except when applied in excess. It is essential, we have seen, in the treatment of disease, to keep in view these properties of all agents capable of influencing the functions of life, that we may, as much as the nature of the case admits of, keep within the stimulant range of our remedies; and within that range, as far as possible, avoid the degree of excitement which produces sensible exhaustion of the vital organs; under which circumstances medicine always operates as a permanent tonic, more or less powerful according to its peculiar properties.

With respect to the nature of the powers of the living animal which we have been considering, the sensorial and muscular powers, and the powers peculiar to living blood, we have found to belong to the living animal alone, all their peculiar properties being the properties of life. The functions of life may be divided into two classes, those which are effected by the properties of this principle alone, and those, by far the more numerous class, which result from the cooperation of these properties with those of the principles which operate in inanimate nature. The nervous power we have found to be a modification of one of the latter principles, because it can exist in other textures than those to which it belongs in the living animal, and we can substitute for it one of those principles without disturbing the functions of life.

Late discoveries have been gradually evincing how far more extensive than was supposed, even a few years ago, is the dominion of electricity. Magnetism, chemical affinity, and (I believe, from the facts stated in the foregoing paper, it will be impossible to avoid the conclusion) the nervous influence, the leading power in the vital functions of the animal frame, properly so called, appear all of them to be modifications of this apparently universal agent; for I may add, we have already some glimpses of its still more extensive dominion*.

In the preceding paper my objects have been to review the whole of the functions of the more perfect animal, to ascertain the nature of the powers on which they depend, the seat of each of these powers, the manner in which they are employed in effecting their several functions, and the manner in which they are associated in

* See Dr. Roget's Treatise on Electricity.

producing their more complicated results. Nothing in any part of the subject has been taken for granted, no position having been advanced without a reference to the observations or experiments on which it is founded.

I have here for the first time made an attempt, which could not be done till all the facts on the subject had been ascertained, to point out the manner in which the different powers of the living animal influence each other, and thus conduce to their more complicated results; by which, being enabled to analyse these results, it might easily, were this the proper place, be shown, that we better see the operation of its different powers in the various deviations from a state of health, and can, under certain circumstances, better regulate the means of obviating them.

STRYCHNOS NUX VOMICA IN DYSPEPSIA.

To the Editor of the Medical Gazette.

Sir,

In a late communication to your journal, by Mr. Mellor, of Manchester, upon the curative effects of the strychnos nux vomica in certain diseases of the digestive organs, that gentleman observes, "that the late Dr. Belcombe, of York, was in the habit of using it for the relief of indigestion, but in what particular form of this complaint, I am not at present prepared to say." I beg to state that my late father prescribed the strychnos very generally, and with almost constant success, in those forms of stomach affection denominated pyrosis and gastrodynia, particularly when the disease appeared to proceed from some morbid irritability of the nerves of that organ; and that he was preparing a detailed account of his observations upon this medicine when he was attacked by a severe illness, from which he never recovered.

I promise myself some time the pleasure of laying this and other details of his successful practice before the medical profession.

Since the introduction of the alkaloid principle, which I am happy to see has obtained a place in the Pharmacopœia, I have been in the habit of employing it in doses of $\frac{1}{12}$ to $\frac{1}{6}$ of a grain with the same unvarying effect; and I can safely second Mr. Mellor's remarks, and recommend it to the profession as a serviceable and excellent remedy.

I remain, sir,
Your obedient servant,
H. S. Belcombe, M.D.

Minster-Yard,
March 18, 1837.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'Alembert.

1. *A Translation of the Pharmacopœia of the Royal College of Physicians of London*, 1836; *with Notes and Illustrations.* By Richard Phillips, F.R.S.L. & E., &c. (By permission.) Highley.
2. *The Pharmacopœia Collegii Regalis Medicorum Londinensis. Translated, with a Commentary, Chemical, Pharmaceutical, and Medicinal, by* D. Spillan, M.D., &c.

The above are the only translations of the new London Pharmacopœia which have as yet made their appearance, though a third has been most pompously announced, and subscriptions for it solicited.

Mr. Phillips's work deserves on all hands to be first noticed. Dr. Spillan very properly observes, that "no one is better qualified than Mr. Phillips to give a translation of, and commentary on, the Pharmacopœia. His well-earned reputation as a scientific chemist, and the fact of his having been appointed by the College a member of the Committee for its arrangement, peculiarly entitle him to the right of explaining the *rationale* of processes in conducting which he himself acted so considerable a part." When, however, we compare the present position of Mr. Phillips, with respect to the College, with that he formerly occupied (a few years back), we cannot help exclaiming—

"Tempora mutantur et nos mutamur in illis."

The principal value of Mr. Phillips's book consists in the notes and illustrations. They are concise, and for the most part very clear, accurate, and valuable. We cannot, however, compliment him on his diagrams explanatory

of the theory of the processes; they are bad and confused. It would have been much better had he constructed them on the plan followed (we believe not invented) by Dr. Boswell Reid. Meissner's diagrams (in his *Handbuch d. Allgemein und techn. Chemie*) are much superior to those used by Mr. Phillips.

There is an omission in these diagrams which we much regret; we mean the number of the reacting equivalents. By the way, why has Mr. Phillips omitted to give diagrams illustrative of the chemical changes which occur in the manufacture of hydrocyanic acid, oxysulphuret of antimony, &c.? They could be readily formed, and ought not to be left out.

We congratulate Mr. Phillips on the alteration of his opinion with respect to the existence of the oil of wine. In the translation of the last edition of the Pharmacopœia, he told us he was unable either to manufacture or purchase this compound, though to our certain knowledge it has been manufactured and sold at Apothecaries' Hall for many years (we believe for at least half a century). And here we may remark, that we think Mr. Hennell has behaved very generously in furnishing what Mr. Phillips acknowledges to be "highly useful information," after the (as we believe, unfair) charges brought by Mr. Phillips against the chemical operators at the Hall.

We strongly advise Mr. Phillips to have the medical information contained in his translation carefully revised and corrected for the next edition: we can assure him there are numerous errors in it. For example, the account of the effects of Aconitina is very incorrect. Mr. Phillips tells us that its "taste is at first bitter, and afterwards acrid; but this is not permanent, and appears to be derived from another principle (anemonia), from which it may be separated by repeated solution in, and precipitation from, acids." Now we beg leave to tell the author, that one of the essential characters of aconitina is intense and permanent acridity, and we challenge him to produce us aconitina by the process in the Pharmacopœia, devoid of this property.

Mr. Phillips is equally in error when he says, that "applied to the eye, it occasions a temporary *dilatation* of the pupil;" aconitina causes *contraction* of the pupil, even in old amaurotic cases. For further information on this point, we would refer to Dr. Turnbull's late publication.

Another error, and one of a gross kind, occurs under the head of iodide of lead. This substance, Mr. Phillips says, is "used only in the form of ointment"!! We presume every member of the profession must have either seen or heard of the internal employment of iodide of lead; and therefore we can only attribute this error to Mr. Phillips not having consulted any physician or surgeon on the subject: we advise him to peruse Dr. O'Shaughnessy's translation of Lugol's Essays, pp. 205, *et seq.* 1831, before his next edition appears.

Again, there is surely a mistake in the dose of the *compound solution of iodide of potassium*. Mr. Phillips says the dose is "from ♏v. to ♏x." Now ten minims of this solution contain only $\frac{1}{192}$ of a grain of iodine, and $\frac{1}{96}$ of a grain of iodide of potassium.

We could refer to several other analogous errors, but we have said enough to convince the author of the necessity of revising this part of his work.

On a former occasion*, we took notice of Mr. Phillips's statement with respect to the nature of Prussian blue; and we may here add, that, in a work like the present, we conceive Mr. Phillips ought either to explain the composition of the different substances, and the changes in the various processes, according to the present received and approved doctrines of chemistry,—or at any rate, to give his reasons for taking different views of them. We wish he had followed either of these plans with respect to Prussian blue. In his translation there appears to us to be a singular lack of information on the composition of the double salts,—a want of those comprehensive views so necessary to the proper understanding of the nature of these compounds.

Notwithstanding the preceding strictures, Mr. Phillips' translation is certainly a useful and valuable work; and we strongly recommend it both to practitioners and pupils.

Dr. Spillan's production is neatly and shewily got up; but we regret we cannot speak favourably of its contents.

* Medical Gazette, p. 791, present volume.

The translation is frequently bad or even erroneous: thus the word *rhizoma* is translated *root;* "concretum in propriis capitis cellis repertum" is rendered "a concrete substance found in cells of the head" (the important word *propriis* not being translated). Short sentences are often left out: thus, under Lacmus, "thallus præparatus" is omitted, and the sentence "quantum fieri potest," at page 25 of the Pharmacopœia, is not translated.

These, be it remembered, are only a few of the errors we have observed on examining about half a dozen pages selected at random.

The *notes* abound in the grossest errors. The author is evidently ignorant of chemistry, and totally unfit, therefore, to criticise the processes, or to offer explanations thereof. There is not a single statement on chemical subjects that can be relied on. The account of the effects and uses of the substances is not better than that contained in Mr. Phillips' translation, and oftentimes not so good. Mr. Phillips, besides, almost invariably gives the doses of the preparation, whereas, in a large number of instances, Dr. Spillan has omitted to do so.

We are sorry to have had occasion to speak thus severely of his translation, for we can assure Dr. Spillan we were *à priori* disposed to report favourably of it.

Medicinische Phænomenologie; ein Handwörterbuch für die ärztliche Praxis. (Medical Phenomenology; or a Dictionary of the Practice of Medicine). Von Robert Küttner, M.D. 2 Bände. Leipzig; Schloss.

The title of this dictionary is sufficiently explicit: the work embraces all the signs and tokens of disease, arranged in encyclopædia fashion; presenting, in short, a kind of medical *conversations-lexicon.* In an art so conjectural as ours, the advantage of having a good book of ready reference, on the phenomena which present themselves, often very unexpectedly, cannot fail to be appreciated by practitioners; particularly by those who have not yet acquired an extensive experience. The Phenomenology differs from an ordinary medical dictionary, inasmuch as it gives, in an alphabetical arrangement, all the symptoms of disease, as well as diseases themselves manifested by their symptoms. Thus we find the face considered in reference to its varied expressions indicative of disease; the appearances of the eyes, the phenomena of the pulse, &c.; and all treated in a compressed aphoristic style, exhibiting at once brevity and clearness. There is an acuteness, we would also say a profundity, in some of the prognoses attached to certain symptoms, which cannot fail to strike the reader. We have been tempted to wish, in perusing some parts of the work, that the author had given references to his sources; but on reflection, such a proceeding must have swelled the two volumes to a very inconvenient size.

Pathologie und Therapie der psychischen Krankheiten. (Pathology and Therapeutics of Mental Diseases.) Von Friedrich Bird, M.D. Berlin.

The author of this work has been distinguished for several years back, by the number of his contributions to medico-psychological science, but has here concentrated himself in the production of a book purely practical. We must content ourselves with recommending it in strong terms, as our limits at present preclude an analysis. In the dearth of good books on the treatment of mental disorders in our own language, we should be disposed to wish that this of Dr. Bird's were translated by some experienced hand.

Medicinischer Almanach für das Jahr 1837. (Medical Almanack for 1837.) Von Dr. J. J. Sachs. Berlin. Schloss.

So large a mass of useful and interesting information, collected together in a Medical Almanack, we have never before seen. Biography, the state of the Universities, original articles on subjects of general importance, and abstracts of the best articles which have appeared in the German periodicals during the last year, form a miscellany of much attraction; and the spirit of the whole is excellent: no dogmatic or impertinent obtrusion of the editor's opinions are any where observable.

MEDICAL GAZETTE.

Saturday, March 25, 1837.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE WARBURTONIAN UNIVERSITY.

SOME curious reader may ask which University we mean by the title prefixed?—Whether the University College, which so long affected the superior appellation, and in which Mr. Warburton has from the first been a prime mover?—or can it possibly be the new establishment recently chartered for giving degrees, and at the Council board of which the member for Bridport has also secured for himself a seat? We mean precisely the latter.

But it should be some very simple reader who would ask the question,—some "Shallow," who would be put to his wits' ends by the interrogatory—

"Under which king, Bezonian? speak, or die!"

Every one knows that there are two potentates connected with the newly-chartered University—one the noble Earl, "our beloved cousin," who is duly and regularly placed at the head of the institution; the other a personage who is well disposed, and nothing loath, to take upon him the whole virtual direction. Now who does not see that, at least in the arrangements of the medical department, the unobtrusive authority of Lord Burlington must fall prostrate before the renowned attainments of the great patron and guardian of the medical profession, the illustrious chairman of the Committee of Medical Education? It is in this way that merit of a peculiar kind always works out for itself a suitable seat in which to conduct its operations.

"Coming events," they say, "cast their shadows before." We lay no claim to second sight, or to be seers into futurity: we only watch the "shadows," and it is thus that in our mind's eye we have traced out, without much difficulty, what is yet to be,—unless the predetermined object of certain parties, which looks very like a plot or an intrigue, be defeated.

We last week alluded to a scheme which is on foot to institute an office—that of Registrar—requisite, doubtless, to a certain extent, but one should think not essentially demanding much personal service in the present instance,—certainly not at the outset of the speculation. Well, what thinks the reader is the modest endowment sought to be fixed upon this office, in these times of economy and retrenchment, by a certain member or members of the Council? Why, the little round sum of 700*l.* or 800*l.* a-year ("say 800*l.*") has been slyly solicited; but, fortunately for the public, not yet awarded. The hint is worth attending to; for if the scale of expenditure be commenced with a little item of this kind, the public had need to look cautiously how their money is voted away in passing the next supplies.

What may be the duties of Registrar in the new establishment, we cannot exactly say; but we dare to conjecture that they cannot be very onerous for some time. The 800*l.* a-year, therefore, appears to us very much to resemble a job.

Candidates, we understand, of very various orders of merit, have offered themselves; among them, a learned physician of the provinces, a *ci-devant employé* of the College in Gower-street, and an official person, whom we should have thought sufficiently provided for already. The latter person is the useful *factotum* to whom we alluded last week, and who is backed by Mr. War-

burton against all comers. Does this render the transaction less like a job?

Such is the auspicious commencement of business in the newly-chartered institution: it exhibits, in a strong light, the earnestness with which certain of its functionaries wish to identify its interests with their own; and in a council, where all were intended to be placed on an equal footing, the anxiety of at least one to rule and govern the rest. Let that one only have his own registrar—an *attaché*, bound in gratitude for some valuable favours already conferred—and the University is virtually in the hands of the wily councillor.

Let it not be supposed that we bear any hostility to the institution abstractedly: we have long advocated the propriety — the expediency — of having in this great metropolis a corporate body, endowed with the power of granting degrees to London students. But in the present instance, as we have on other occasions fully explained, we soon found ourselves obliged to withhold our confidence and approbation: the miscellaneous group of Fellows suddenly appointed, after their chairs had been going a-begging for many months, were far from impressing us with respect for the nascent establishment; while the name of one at least of the well-beloved Councillors or Fellows was of itself sufficient to stamp the character of the institution. Add to this what we have observed among the very first acts of the University — their intriguing, or permitting intrigue, in order to create an expensive sinecure, and the pertinacious exertions of one of them to thrust his well-known factotum into the office: —who of fair, candid, and honest principles, must not be disgusted with the whole affair?

To those of the council who wish well to the establishment, and who prefer that it should be regulated on straightforward rather than jesuitical principles, we earnestly recommend a steady consideration of these things. They will soon see the danger likely to arise from the predominance of an intriguing influence amongst them. An exclusive denomination will be fastened on the University: it will be called after the individual who monopolizes the functions of his colleagues, and who, by his pernicious interference, brands the institution with an indelible impression. We warn the steady well-intentioned members of the council — for we know there are some such — to guard against and strenuously resist this influence. Let them, as they value the institution to which they belong, set their faces against jobbing and intrigue, the very imputation of which in the outset were enough to stifle all hope of future respectability.

This week we have just glanced at the job of the registrarship: we have something to say on another occasion, when we have more room, concerning certain other curious proceedings of the Council, and their virtual President. Ostensibly only a few days have been devoted to business at Somerset House; but, from the issue, we suspect that all has not been done above board. A little time, no doubt, will open up the mystery.

ROYAL INSTITUTION.

Friday, March 17, 1837.

New mode of exciting the common Voltaic battery.

Mr. Faraday gave a lecture this evening on Mr. De la Rue's method of exciting the common Voltaic apparatus, by a solution of sulphate of copper, instead of the dilute acid ordinarily employed. The lecturer stated that this salt had been applied to the voltaic apparatus, first by Mr. Daniel, afterwards by Mr. Mullens, and,

subsequently by Mr. De la Rue. The two former gentlemen, however, use a peculiar form of apparatus, and insert animal membrane between the zinc and copper plates, whereas Mr. De la Rue employs the ordinary apparatus, making use of no membrane.

Mr. Faraday then proceeded to perform various experiments, in order to show the power of the battery when charged with the cupreous solution. These consisted of the decomposition of water (in the voltimeter), and the ignition of charcoal, and various metallic leaves. Until the termination of the lecture, he failed, however, in igniting platinum wire. The deflagration of the metallic leaves was, in our opinion, not equal in brilliancy to what is observed when the battery is charged with acid. Indeed the exhibition was altogether not a very successful one, and which Mr. Faraday admitted, but stated that he had not previously tried some of the experiments.

It appears to us, that this new method of exciting the common voltaic apparatus is more curious than useful. It is more expensive, we believe, than the ordinary method: the battery is put in action very slowly—an hour or two, at least, being required to get it into a working state; and, lastly, it is uncertain in its action, as proved by the fact that even in the hands of Mr. Faraday it was not completely successful. Twice, during the lecture, Mr. De la Rue was obliged to put acid into the cells of the troughs, so that the effects shown by Mr. Faraday were not produced by the sulphate merely. Indeed, after the lecture, Mr. De la Rue admitted, that unless the plates were perfectly clean (a condition rarely met with in large batteries), some acid must be employed.

In noticing the theory of the action of the sulphate of copper, Mr. Faraday, in the first place, showed the efficacy of the solution as a conductor of electricity, and then stated that it was at present somewhat uncertain on what the efficacy of the sulphate, as an excitant, depended: whether on its obviating the evolution of hydrogen, or by its putting the zinc in a new condition.

A pretty little piece of apparatus for subjecting points of various substances to the galvanic influence, invented by Mr. De la Rue, was shown. Silver was ignited by it, and produced a beautiful green light; and the colour of the light evolved by the ignition of charcoal points was variously altered by strontian, soda, and boracic acid.

At the conclusion of the lecture, Mr. Faraday very feelingly alluded to the murder of Mr. Davidson, who had been a pupil of his and Mr. Brande's.

SIR BENJAMIN BRODIE'S HUNTERIAN ORATION.

An oration of this nature can scarcely be considered a fit subject for critical analysis, but we have made a few extracts, with appropriate headings, which we think will be interesting to our readers:—

Dr. W. Hunter's Museum.—If we inquire into the private life of Wm. Hunter, we find that he was never married; that his domestic establishment was on a very limited scale, and that his habits were of the most frugal kind. But let us not suppose that this was in any degree the result of avarice. He had no taste for those luxuries, or for that display, for which wealth is usually exchanged; or, at all events, he had another object in view, which he prized more highly than these: and, in whatever related to this, he was liberal even to extravagance. I need scarcely say that I refer to his museum. I have already had occasion to mention that part of it which related to anatomy. It was collected for the purpose of illustrating his lectures, and its chief value consisted in the preparations illustrative of the changes of the gravid uterus, in those relating to diseased structure, and in the catalogue. The latter is replete with the most interesting pathological information on a great variety of subjects; and I am greatly deceived by my juvenile recollections of it, if I am not justified in asserting that the publication of it, even at the present time, would be of the greatest service to our profession.

But many present remember, as I do, that the anatomical department occupied only the gallery of the building in which the museum was placed. A most valuable and extensive library, and a costly collection of medals and minerals, filled the lower part of it, and served to demonstrate that the collector of these treasures could well estimate the value of other branches of knowledge, as well as those in the pursuit of which he was himself engaged. There was a collection of paintings also, by the first masters, but deposited in other apartments. It is said that the expense of forming the museum did not amount to less than 100,000*l.*, the whole of which was derived from the savings of a laboriously earned professional income.

This museum is now deposited in the University of Glasgow. We cannot grudge the possession of it to that institution which had the honour of forming the young mind of him who has done us so much honour since. But some persons

may be of opinion that, as it would have been more accessible, so it would have been more useful, if placed in this metropolis of the world rather than where it now is. Such seems to have been William Hunter's opinion also. How it happened that he altered his original intentions respecting it, is so well known, that it may seem almost superfluous to say a word on the subject. He pointed out to the government of that day, a vacant piece of ground belonging to the crown lands in the vicinity of Charing-cross, on which, if it were granted to him for that purpose, he offered to erect a suitable building, and establish his museum, at the same time endowing a professorship, and to bequeath the whole to the public. The minister to whom this proposal was made, scarcely condescended even to answer William Hunter's letter!

Cuvier and Hunter. — The study of comparative anatomy (that term being intended to designate the anatomy of animals generally, as contradistinguished from the anatomy of any single species) is of very ancient date. It is one of those many branches of science which occupied the comprehensive mind of Aristotle; and since the revival of the love of knowledge from the torpor of the dark ages, there have been always individuals who pursued it to a greater or less extent. But, up to the middle of the last century, these inquiries were carried on in a vague and desultory manner. A master-mind was wanting, capable of grasping the entire subject; of analysing, combining, and arranging the apparently heterogeneous and discordant materials of which it is composed; and of exhibiting them in their mutual relations, forming one harmonious system, worthy of the Creator of the universe. Those who attribute the glory of having first accomplished these objects to Cuvier, do great injustice to our own countryman. The labours of John Hunter preceded those of the French philosopher. In Cuvier's work on Comparative Anatomy, we find recorded an immense number and variety of facts connected with the structure of all kinds of animals; but we need only to walk into the museum of this College to see the facts themselves, displayed by the hand of John Hunter, or under his immediate superintendence. I was acquainted formerly with a most intelligent Greek, who having received the best education which Greece afforded, passed some years in this country. This gentleman was accustomed to describe one of the advantages which he had derived from his visit to England, in something like the following terms: — "I had acquired in Greece a good deal of the learning which is to be obtained from books; but I now know how much inferior the study of books is to the study of things." Such is the difference, in one respect, between the lectures of Cuvier and the museum of Hunter.

But that museum is not merely a great collection of anatomical specimens: the distribution and arrangement of them indicate the most philosophical views of physiology. The mind of the student is gradually led from the elementary to the most complicated forms of animal existence. The simple functions of one race of creatures serves to illustrate what would be otherwise incomprehensible in the functions of others. It cannot be doubted, that the arrangement of the Hunterian Museum suggested to Cuvier that which he adopted in his lectures, although he deviated from it in some particulars.

Although between forty and fifty years have elapsed since the death of John Hunter, there is one part of his labours in anatomy and physiology which has only lately become known to the public. He left behind him some manuscript notes, intended to be introductory to the study of the several departments of his museum. These are now being published in the catalogue; and they exhibit, in a remarkable degree, those powers of observation, of tracing resemblances and analogies, and of generalisation, which belong to genius, and lay the foundation of discoveries. It cannot be doubted that an accomplished writer would readily convert these notes into essays, not less interesting and instructive, and certainly containing more original matter, than the introductory chapters which we read with so much delight in Cuvier's lectures.

I trust that, in the comparison which I have now made between Hunter and Cuvier, I shall not be suspected of any want of respect for the last-mentioned of these distinguished philosophers. Such are the riches of Cuvier's reputation, that there can be no inducement to claim for him any part of the wealth of others; and his most zealous admirers cannot reasonably complain, if we concede to John Hunter the superiority as a comparative anatomist and physiologist. In other matters Cuvier stands without a rival. He was deeply versed in natural history, which Hunter cultivated merely as subsidiary to anatomy. By his researches respecting the fossil remains of animals, he became the inventor of an entirely new science; of that science, which the genius of Buckland has made one not only of universal interest, but, I may say, of practical importance, by applying it to the illustration of the great truths of natural theology.

John Hunter's Industry.—The first thing which it occurs to me to notice in the character of John Hunter, is his unrivalled perseverance and industry. His life was one of incessant labour. He slept a little after dinner, and four hours were devoted to sleep after midnight; otherwise he was constantly employed in some one of his pursuits. When my friend Mr. Thomas brought him a letter of introduction on his coming as a student to London, Mr. Hunter appointed him to call upon him at five o'clock on an October morning. Mr. Thomas was punctual to his appointment, and found him already busily engaged dissecting an insect under the light of a lamp. Undoubtedly much of this was to be attributed to his physical construction. He could dispense with a portion of that sleep which is indispensable to others. His animal frame enabled him to make exertions which others were incapable of making. But much was to be attributed also to the operation of a vigorous and energetic mind, triumphing over the weakness of the body. For some years before he died, he had laboured under the symptoms of complicated bodily disease, including those of *angina pectoris*, and his sufferings were often severe and alarming. But this, which would have reduced most others to a state of inaction, made little difference to him. His pursuits were scarcely interrupted by it. When Mr. Thomas visited him at five o'clock in the morning, he was in that state in which any sudden and violent emotion of the mind might have endangered his life.

His Experiments on Vegetables.—When I was formerly giving lectures as Professor of this College, I found in a drawer of the museum what appeared to be some pieces of dried sticks. Mr. Clift said that he did not know what they meant, but he was sure that they meant something, and therefore that he had preserved them. When I examined them, I found that they were the result of some interesting experiments in vegetable physiology. It appeared, from one of them, that he had made the first and most important of the experiments made many years afterwards by Mr. Andrew Knight, proving the descent of the sap through the vessels of the bark. Yet these specimens had no ostensible place in the museum; and they would have been swept away as rubbish but for the care of Mr. Clift.

Character of Home.—There was another distinguished individual, the last of the school of the Hunters, who was joined with Dr. Baillie in instituting this annual commemoration of his relative and preceptor: and whom I feel myself the more called upon to mention, as I was indebted to him for many acts of kindness in the early part of my professional career, and as I cannot doubt that some circumstances, to which it is painful for me even to allude, and into the consideration of which I certainly do not feel myself called upon to enter, have tended to cast a shade over the merits which he really possessed. I shall endeavour to describe Sir Everard Home, such as he appears to me to have been, when I first became acquainted with him. He was a great practical surgeon. His mind went directly to the leading points of the case before him, disregarding all those minor points by which minds of smaller capacity are perplexed and misled. Hence his views of disease were clear, and such as were easily communicated to his pupils; and his practice was simple and decided. He never shrunk from difficulties, but, on the contrary, seemed to have a pleasure in meeting with them, and overcoming them: and I am satisfied that to this one of his qualities many of his patients were indebted for their lives. Much valuable information is to be found in his surgical works, and his observations on ulcers, and those on the diseases of the prostate gland, may be perused with advantage by the best educated surgeons of modern times. He possessed the art of employing every instant of his time; and could, with perfect ease, transfer his attention at once from one subject to another quite different from it. Hence it was that he was enabled, although engaged in a large private practice, to pursue the study of comparative anatomy to a considerable extent. His earlier papers on this subject, communicated to the Royal Society, are of great and acknowledged value. But, unfortunately for his reputation, his ambition rather increased than diminished, while his mental powers were gradually declining under the influence of an indifferent state of health, and increasing years. In his latter days he had an overweening anxiety to appear before the world as a discoverer; and his friends in the council of the Royal Society too readily inserted whatever he offered to them in the Society's Transactions; and the result has been, that many of his later communications are of such a nature that his best friends must now regret that they were ever published.

Character of Blizard.—Sir Wm. Blizard retained his faculties but little impaired, even when he had entered his ninety-third year; and this and other circumstances combined to render him an object of interest with us all. He stood among us like the remnant of a former age, and we are always to bear this in mind, when we form our estimate of his professional character.

It is not to be supposed that, at his advanced period of life, he could have kept

himself on a level with the increasing knowledge of the day; and it is but justice that we should compare him, not with those among whom he died, but with those who were his competitors in the meridian of his life. We find that he then occupied a considerable station in society, and he retained his reputation for so long a time, that we cannot but suppose that it rested on a substantial basis. He possessed extraordinary zeal and energy; unbounded activity in a great degree supplied the place of steady industry, and these qualities mainly contributed to his elevation. Of a sanguine and enthusiastic turn of mind, he carried something like the spirit of chivalry into the sober pursuits of his profession. To this College, especially, he had a kind of romantic attachment, and I have no doubt that he believed that all the world joined with him in his admiration of it:—

Nil oriturum alias, nil ortum tale fatentes.

It was curious and pleasing to see so much of the simplicity of a boy remaining in the old man, after more than seventy years of incessant occupation in this busy world!

Sir William Blizard was distinguished for a remarkable degree both of physical and of moral intrepidity. Of the former, many examples were well-known to his acquaintance; and the whole tenor of his life was a demonstration of the latter. Where he had made up his mind that a certain line of conduct was the proper one for him to pursue, (and in this it was with him as it is with most of us, that his judgment was sometimes right and sometimes wrong), nothing could turn him from his purpose. His own private interests never entered into his calculations. Indeed, with respect to these he was careless in an almost extreme degree. Many years ago he lost nearly the whole of the savings derived from his professional labours, by coming forward to assist a near relation who was in embarrassed circumstances; and he never redeemed his fortune to any considerable extent, although he certainly might have done so, if that had been his object, and he had no habits of personal expense to prevent him.

A College Examination.—At a meeting of the Court of Examiners, not long before he died, he (Sir William Blizard) began his examination of a candidate in the following manner:—"Be so good, sir, as to explain to me the difference between schindylesis, synarthrosis, diarthrosis, and ginglymus?" The young man hesitated, evidently not comprehending the question, when some one suggested to Sir William that these terms were not much in use among the modern teachers of anatomy. He shook his head, lamenting, as much in earnest as in joke, the degeneracy of the age.

Appointment of a Hunterian Professor.—The lectures illustrative of the museum have hitherto been consigned to different members of the College, none of whom have found it convenient to retain the office of professor for more than three or four years; and who, being engaged in other laborious duties, were seldom able to do full justice to the task which they had undertaken. Those lectures will now be delivered by the junior conservator, Mr. Owen, whose zeal and talents are known to you all; and who, devoting himself entirely to anatomy and physiology, will prove, as I venture to predict, a more efficient professor than any of us, who have preceded him. Thus there will be established, by means of this great museum and the lectures, a school of what may be called the "science of life," such as has never existed in this metropolis before, and we may reasonably conclude that this will ultimately be productive of great practical results. The wards of the hospital and the dissecting-room will enable the diligent student to obtain an adequate knowledge of what has been already done in surgery, and to become a good practical surgeon; but those who would earn for themselves pre-eminence, by adding to our stores of knowledge and improving the science of their profession, must carry their views further, contemplating the phenomena and laws of life generally; not as they are exhibited in our own species only, but as they exist in the whole animal creation. If John Hunter had confined himself to a knowledge of human anatomy, however minute, and to mere clinical studies, his treatise on the Blood and Inflammation could never have existed. I need go no further than this. This indisputable fact is in itself sufficient to convict those of ignorance and error, who hold that medicine and surgery are but empirical arts, and that physiological researches, and scientific views of disease, are of little importance to the practical physician and surgeon.

FATAL ENTERITIS PRODUCED BY LUMBRICI.

Doctor Petrenz, of Schandau, has published the following case in Clarus and Radius's Journal:—

A girl, aged nine years, of feeble habit, and pale, cachectic appearance, and, from the poverty of her parents, accustomed to poor and insufficient diet, was attacked with pains in the abdomen, and periodic thirst. After these symptoms had lasted for some time, she was seized with vomiting, and threw up a lumbricus. She then

got rigors, followed by heat of skin, pain in the bowels, and violent thirst. When seen by Dr. Petrenz, her face was covered with a cold perspiration; her hands cold and blue; feet moderately warm; belly distended and painful; bowels confined for two days; urine suppressed; tongue moist; great bodily weakness; but no affection of the sensorium. The usual remedies were promptly applied, but three hours afterwards the whole body became cold, the respiration laboured, and the patient, having discharged a lumbricus, with a large quantity of blood, per anum, suddenly expired.

On opening the abdomen, the intestines were found in a state of gangrene, particularly the cæcum, colon, and rectum. The right and left flexures of the colon were distended with a mass of lumbrici; in the former, Dr. Petrenz counted fifty worms, in the latter, nearly as many. The remaining portion of the large intestine contained also a considerable quantity. The number found in the whole intestinal tube was computed to be about 200. No trace of mucus, or any of the usual contents of the intestines, could be discovered. The rest of the abdominal organs were in the normal state. There were no worms in the stomach. There was no perforation in any part of the digestive tube, nor were there any worms found in the cavity of the peritoneum.—*Dublin Journal.*

AWFUL MISTAKE IN MIDWIFERY PRACTICE.

Malignant soft tumors, whether of the uterus or ovarium, when they present themselves in the vagina at an advanced period of utero-gestation, give to the less experienced medical attendant the idea of a *placenta prævia*, and many have acted under this erroneous impression. One of the most extraordinary cases I ever was summoned to, proved to be of this description; the operator passed his hand through the soft tumor in the vagina, and missing the uterus, entered the abdominal cavity, seized and ruptured the gall-bladder, and actually delivered numerous biliary calculi *per vaginam!* I communicated this case some time since to Professor Naeglé, for publication in a foreign journal. I was not summoned until after the decease of the patient; and in the presence of three practitioners I opened the body. Numerous fungoid tumors arose from the right ovarium, and one of them, descending into the pelvis, had presented in the vagina, and being torn, furnished the hæmorrhage; pieces of this soft tumor were removed, and appeared to be the placenta, and some loss of blood continuing, delivery was determined upon, but no fœtus could be found; the hand of the accoucheur had passed through the soft tumor occupying the vagina, into the peritoneal cavity, and the gall-bladder, filled with biliary calculi, had been seized in the search for the foot of the fœtus. Dissection verified the occurrences as I have stated them; the uterus and its appendages are in my pathological collection.—*Mr. Crosse's Retrospective Address.*

A GENERAL BILL

OF THE

BURIALS, WITHIN THE CITY OF LONDON, AND BILLS OF MORTALITY,

From Dec. 15, 1835, to Dec. 13, 1836.

DISEASES AND CASUALTIES OF THE YEAR.

Diseases.	
Abscess	110
Age and Debility	2329
Apoplexy	405
Asthma	853
Cancer	123
Childbirth	172
Cholera	2
Consumption	3238
Constipation of the Bowels	14
Convulsions	1617
Croup	169
Dentition or Teething	393
Diabetes	1
Diarrhœa	21
Dropsy	847
on the Brain	578
on the Chest	54
Dysentery	7
Epilepsy	24
Erysipelas	75
Fever	354
(Intermittent or Ague)	2
(Scarlet)	261
(Typhus)	59
Fistula	6
Gout	91
Hæmorrhage	32
Heart, diseased	155
Hernia	10
Hooping-cough	311
Hydrophobia	1
Indigestion	10
Inflammation	1482
Bowels & Stomach	236
Brain	165
Lungs and Pleura	272
Influenza	5
Insanity	226
Jaundice	35
Jaw, locked	7
Liver, diseased	246
Measles	404
Miscarriage	16
Mortification	194
Paralysis	164
Rheumatism	32
Serofula	29
Small-pox	536
Sore Throat and Quinsey	36
Spasm	59
Stone and Gravel	13
Stricture	14
Thrush	93
Tumor	47
Venereal	8
Worms	17
Unknown Causes	1139
Casualties, as under,	439

Casualties.	
Drowned	104
Died by Visitation of God	53
Excessive Drinking	18
Found Dead	23
Killed by various Accidents	192
Murdered	2
Poisoned	6
Suicides	41

Buried { Males 9,202 / Females 9,027 } Total 18,229

Of the number buried were,

Under 2 years of age	4157	40 and under 50	1948
2 and under 5 years	1634	50 and under 60	1866
5 and under 10	783	60 and under 70	1849
10 and under 20	673	70 and under 80	1573
20 and under 30	1315	80 and under 90	685
30 and under 40	1651	90 and under 100	94
		107	1

Decrease in the burials reported this year, 3186.

LIST OF DRUGS,

ON SALE IN THE ENGLISH MARKET,

With their Prices and several Duties.

(From the Official Returns up to Tuesday, March 21, 1837.)

	Price.			Duty.		Duty Paid	
						In 1837 to last week.	Same time last year.
	£ s. d.		£ s. d.		s. d.		
Aloes, Barbadoes, D.P. c	12 0 0	to	30 0 0	B P. lb	0 2	24,467	24,642
Hepatic (dry) BD..... c	5 0 0		14 0 0	F. lb	0 8		
Cape, BD. c	1 10 0		1 16 0				
Aniseed, Oil of, German, D.P....lb	0 9 0		0 9 6	F. lb	1 4	——	375
E. I. .....lb	0 7 0		0 7 6	E. I.	1 4	328	31
Assafœtida, B.D. c	0 2 10		0 5 0	c	6 0	——	4
Balsam, Canada, D.P. .....lb	0 1 3		0 1 4	lb	0 1	401	11,52
Copaiba, BD.....lb	0 2 7		——	c	4 0	67	83
Peru, BD. .....lb	0 5 0		——	lb	1 0	142	929
Benzoin (best) BD..... c	25 0 0		50 0 0	c	4 0	20	23
Camphor, unrefined, BD..... c	9 0 0		——	c	1 0	165	62
Cantharides, D.P. .....lb	0 5 9		——	lb	1 0	6,821	4,776
Carraway, Oil of, D.P. .....lb	0 9 0		——	lb	4 0	291	338
Cascarilla or Eleutheria Bark, D.P.C.	1 15 0		——	lb	0 1	1,836	3,168
Cassia, Oil of, BD.....lb	0 9 0		——	lb	1 4	788	1,496
Castor Oil, East India, BD .....lb	0 0 6		0 0 10	c	1 3	1671	1,677
West I. (bottle) D.P. 1½lb	0 2 3		——		——		
Castoreum, American .....lb	1 15 0		——	lb	0 6	147	668
D.P. Hudson's Bay .....lb	1 0 0		1 4 0				
Russian.....lb	none						
Catechu, BD. c	1 0 0		——	c	1 0	10,152	2,133
Cinchona Bark, Pale (Crown)....lb	0 2 0		0 3 6	lb	0 1	48,405	20,366
BD. Red .....lb	0 3 0		0 6 0				
Yellow .....lb	0 1 6		——				
Colocynth, Turkey .....lb	0 2 6		0 4 0	lb	0 2	3,212	4,412
D.P. Mogadore .....lb	0 3 0		——				
Calumba Root, BD. c	1 4 0		2 5 0	lb	0 2	4,898	4,694
Cubebs, BD. c	3 0 0		——	lb	0 6	8,858	6,859
Gamboge, BD. c	5 0 0		15 0 0	c	4 0	37	37
Gentian, D.P. c	1 4 0		——	c	4 0	248	70
Guaiacum, D.P.....lb	0 1 0		0 1 8	c	6 0	16	——
Gum Arabic, Turkey, fine, D.P... c	8 0 0		9 0 0				
Do. seconds, D.P. .. c	5 0 0		7 0 0	c	6 0	974	3,101
Barbary, brown, BD. c	3 19 0		——				
Do. white, D.P..... c	4 15 0		——				
E. I. fine yellow, BD. c	3 0 0		3 10 0	c	6 0	596	972
Do. dark brown, B.D. c	1 15 0		2 5 0				
—— Senegal garblings, D.P. c	4 15 0		5 0 0	c	6 0	171	322
—— Tragacanth, D.P. c	13 0 0		20 0 0	c	6 0	60	18
Iceland Moss (Lichen), D.P. ....lb	0 0 2½		0 0 3	lb	0 1	810	774
Ipecacuanha Root, B.D. .....lb	0 3 0		——	lb	1 0	3,627	2,043
Jalap, BD. .....lb	0 1 10		——	lb	0 6	12,195	11,588
Manna, flaky, BD. .....lb	0 5 0		——	lb	0 3	11,706	4,701
Sicilian, BD. .....lb	0 1 7		——				
Musk, China, BD. .....oz	1 0 0		1 8 0	oz	6 0	405	459
Myrrh, East India, BD. c	5 0 0		14 0 0	c	6 0	43	66
Turkey, BD..... c	2 0 0		11 10 0				
Nux Vomica, BD.....lb	0 8 0		0 9 0	lb	2 6	294	——
Opium, Turkey, BD. .....lb	0 15 0		0 16 0	lb	1 0	8,561	11,342
Peppermint, Oil of, F. BD.....lb	1 0 0		——	lb	4 0	341	167
Quicksilver, BD. .....lb	0 3 8		——	lb	0 1	66,184	63,701
Rhubarb, East India, BD.....lb	0 2 0		0 3 6	lb	1 0	7,899	10,457
Dutch, trimmed, D.P. lb	0 3 6		0 4 6	F. lb	1 0	1,936	1,871
Russian, BD. .....lb	0 8 3		——				
Saffron, French, BD. .....lb	1 1 0		——	lb	1 0	1,580	1,715
Spanish .....lb	1 1 0		——				
Sarsaparilla, Honduras, BD.....lb	0 1 0		0 1 9	lb	0 6	22,679	24,527
Lisbon, BD. .....lb	0 2 0		——				
Scammony, Smyrna, D.P.....lb	——		——	lb	2 6	2,584	2,546
Aleppo .....lb	0 12 0		0 15 0				
Senna, East India, BD. .....lb	0 0 3		0 0 4	E.I. lb	0 6	25,059	15,641
Alexandria, D.P.....lb	0 1. 6		——				
Smyrna, D.P. .....lb	0 1 0		0 1 3	Other sorts	0 6	20,006	18,064
Tripoli, D.P. .....lb	0 1 0		0 1 3				

‡§‡ BD. In Bond.—c. Cwt.—B. P. British Possessions.—F. Foreign.—D. P. Duty paid.

ANNUAL METEOROLOGICAL REPORT FOR THE YEAR 1836,

Kept at EDMONTON *and* CHELTENHAM.

EDMONTON.

Month.	THERMOMETER. Highest	Lowest.	Mean.	Range.	BAROMETER. Highest	Lowest.	Mean.	Range.	RAIN. Inches.	WINDS. N.	S.	E.	W.	N.E.	S.E.	N.W.	S.W.
January...	54	7	37·89	47	30·55	28·98	29·8575	1·57	1·875	1½	3½	4	11	..	3	1	7
February .	51	13	36·05	38	30.30	28·65	29·7396	1·74	1·875	6½	1	1	4½	..	3	1	12
March	65	23	43·06	42	30·24	28 68	29·5178	1·56	3·125	2	4½	½	16	..	2	..	6
April	61	22	44·88	39	30·24	29·02	29·8266	1·22	2·475	11	3	4½	9	..	..	1½	1
May	72	25	50·73	47	30·48	29·64	30 0735	·84	·79	14½	..	8	3	4	1½	..	..
June	82	41	60·27	41	30·22	29·53	29·8605	·69	1·3025	2	6½	2½	14½	..	1	..	3½
July.....	85	41	63·44	44	30·40	29·43	29·9543	·97	1·965	1½	1½	2	22	..	1	1	2
August....	75	42	60·97	33	30·25	29·54	29·9631	·71	1·5625	8	1	2½	10½	2½	1½	½	4½
September.	68	30	88·33	38	30·17	29 16	29·8001	1·01	3·0275	7½	1½	..	16	1	..	1	3
October...	63	22	47·46	41	30·34	28·86	29·9257	1·48	3·2875	3	6½	4	9	½	2	4	2
November.	56	21	39·61	35	30·03	28·80	29·5588	1·23	3·2175	3	2½	1½	11	..	..	1	11
December.	56	20	39·13	36	30·30	28·92	29·6621	1·38	1·6875	5	..	..	2	5	1	1½	16½
Year	85	7	50·98	78	30·55	28·65	29·8116	1·90	26·19	65½	31½	30½	128½	13	16	12½	68½

CHELTENHAM.—KEPT BY MR. SAMUEL MOSS, Chemist.

January...	50·0	23·5	38·85	26·5	30 38	28·85	29·674	1·63	2 49	1	5½	½	5	2½	3½	5½	8½
February ..	52·0	26·0	38·492	26·0	30·22	28·61	29·584	1·61	2·885	½	½	8½	2½	2	5	..	10
March	61·0	29·5	43·089	31·5	30·01	28·54	29·286	1·47	4·49	..	7½	..	9	1½	4½	5½	6
April.....	60·0	31·5	45·325	28·5	30·15	28·76	29·627	1·39	2 59	..	2½	7	2	4	7	..	7½
May	73·0	37·0	52·34	36·0	30·32	29·52	29·966	0·8	0·57	3	..	5½	..	13	4½	2½	2
June	77·0	46·5	58 742	31·5	30 04	29·27	29·667	0·77	2·14	½	3	..	5½	1	2	4½	16½
July	85·0	45 5	62·202	39·5	30·12	29·31	29·741	0 81	3·07	..	10½	..	4½	..	3	1	12
August	74·5	44 5	58·4	30·0	30·05	29·37	29 79	0·68	2·15	4	5½	..	1½	8	1½	2½	8
September.	67·0	40·0	53·2	27·0	29·93	29·01	29·626	0·92	2·755	..	5½	3½	3½	3½	5	½	8½
October....	61·5	26·0	48·2	35·5	30 17	28·63	28·911	1·54	3·45	..	2	6½	11	..	3	3	5½
November..	57·0	26·5	42·159	30.5	29·86	28·64	29 37	1·22	4·785	..	3½	2	2	..	2½	2	18
December.	54·5	21·0	40·02	33·5	30 19	28·76	29·58	1 33	2·47	..	5½	1½	1½	7½	1½	1	13
Year.....	85·0	21·0	48·25	64·0	30·38	28·54	29·57	1·84	33·865	9	51½	35	47½	42	40	25	116
Year 1836	85	21	48 25	64	30·38	28·54	29·57	1·84	33·865	9	51½	35	47½	42	40	25	116
1835	81·5	16	49·305	65·5	30·55	28·70	29·716	1·85	33·445	19	48½	25½	60	33½	34	58½	86
1834	78·5	30	51·983	48 5	30·57	28·91	29·843	1·66	31·50	23	35	20½	53	45½	22½	48½	116½
1833	79	27	50·297	52	30·38	28·60	29·639	1·78	33·455	28½	61½	33	43½	28½	28½	58	83½
1832	76·5	28·5	51·206	48	30·26	29·01	29·725	1·25	..	22½	45	33	54½	31½	32	57	90½
1831	77·5	25	52·205	52·5	30·26	28·52	29·64	1 74	..	32½	43½	36½	51½	27	21	48½	101½
1830	81·5	10	49·275	71·5	30·38	28·76	29·65	1·62	..	30	50	42	44½	15½	18½	51	113½
1829	79 5	17	47·777	62·5	30·32	28·71	29·593	1·61	..	41½	35½	57½	36½	52½	28½	36	75
1828	78·5	27	51·75	51·5	30·23	28·82	29·683	1·41	..	35	38½	30½	48	26	20½	53	114½
1827	80·5	16	49·158	64·5	30·37	28·62	29·693	1·75	..	25½	40½	32	44	41	32½	43	106½
1826	86	18·5	50·385	67·5	30 24	28·87	29·725	1·37	..	24	30	36	46½	50	47	52½	79
1825	93·6	24	58·75	69·5	30·52	28·76	29·64	1 76	..	38	49	50½	44	25	22½	48	88

1836.—THERMOM.—Highest, 85·0, July 5 | Lowest, 21·0, Dec. 23. | RAIN, 33·865. | BAROM.—Highest, 30·38, Jan. 2 | Lowest, 28·54, Mar. 28.

GENERAL OBSERVATIONS.

THE mode of keeping these registers is as follows:—

At *Edmonton*, the warmth of the day is observed by means of a thermometer exposed to the north in the shade, standing about four feet above the surface of the ground; the extreme cold of the night is ascertained by a horizontal self-registering thermometer, in a similar situation. The daily range of the thermometer and barometer is known from observations made at intervals of four hours each, from eight in the morning till the same time in the evening. The weather and direction of the wind are the result of the most frequent observations. The rain is measured every morning at eight o'clock.

At *Cheltenham*, the temperature is ascertained by a horizontal self-registering thermometer, suspended about five feet from the ground, in a north-east aspect; and the observations made at eight o'clock A.M. The pressure of the atmosphere, and the direction of the winds, are registered at eight o'clock A.M., and eight o'clock P.M. The quantity of rain which has fallen is registered at eight o'clock A.M.

CHARLES HENRY ADAMS.

MANSLAUGHTER BY MORISON'S PILLS.

Another of Morison's agents, a man of the name of La Mott, residing at Hull, was tried and convicted lately at the York Spring Assizes, for having administered to a Mrs. Russell a quantity of Morison's pills, and thereby caused her death. This case exhibited as gross quackery as any of its predecessors. Mrs. Russell had been a stout healthy woman, but suffered occasionally from constipation. For two years before her death she was in the habit of taking Morison's pills, for what she called "windy dropsy," and a pain in the kidneys. On the 9th August last she complained of illness, and the prisoner was applied to. From that moment the pills were perseveringly administered, until the patient sunk under her sufferings. The morbid appearanees of irritant poisoning were found in the stomach, and particularly at the pyloric orifice. The mucous membrane of the intestines was softened throughout. For the defence witnesses were called as usual, who said they had taken the pills with benefit. The prisoner was found *Guilty*, and sentenced to nine months' imprisonment.

REMUNERATION FOR MEDICAL ATTENDANCE ON PAUPERS.

It beeomes a matter for consideration, whether the power of appraising these professional services should not be left to some impartial tribunal, which might decide according to any peculiar circumstances appearing to dictate a variation either in the rate or in the form of such remuneration.

If this were considered desirable, the valuation might be entrusted to a Board, consisting of three medical men; two of whom should be appointed by the government, the third by the medical faculty: or if, instead of a Medieal Board acting *per se*, two or three medical Commissioners or Assessors, acting in conjunction with the Poor-Law Commissioners, were preferred, it would be equally neeessary that these should, partly at least, be appointed by, and responsible to, the profession. An analogous arrangement exists in the Tithe Commutation Act, where one of the Tithe Commissioners is appointed by the Archbishop of Canterbury.

Another question arises on this point,—whether the right of appointing sueh representatives or agents should be vested in the *heads* of the profession, or in the whole faculty.

The former arrangement would prove the most simple, speedy, and practicable,—the right of appointment being entrusted to the President of the College of Physicians, the President of the College of Surgeons, and the Master of the Apothecaries' Company, jointly;—but supposing it were deemed essential that the whole medical faculty should possess the right of appointment, the following would be the readiest mode of effecting it:—

Every legally qualified medical practitioner, whether physician, surgeon, or apothecary, to possess the power of *nominating* a candidate, as well as of *voting*.

The nominations and votes to be in writing, and to be forwarded by post to the Secretary of State: the legal qualification of each nominator, and of each voter, to be appended to his name, and his signature to be attested by competent witnesses. The majority of votes to decide the election.—*Appendix to Observations, &c.*

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Mar.* 21, 1837.

Abscess	1	Heart, diseased	1
Age and Debility	55	Hooping Cough	15
Apoplexy	5	Inflammation	20
Asthma	25	Bowels & Stomach	10
Cancer	1	Brain	8
Childbirth	3	Lungs and Pleura	20
Consumption	62	Influenza	3
Convulsions	28	Insanity	5
Croup	5	Liver, diseased	10
Dentition or Teething	9	Measles	1
Dropsy	11	Mortification	4
Dropsy in the Brain	13	Paralysis	5
Dropsy on the Chest	3	Small-pox	3
Epilepsy	1	Thrush	1
Erysipelas	1	Unknown Causes	1
Fever	11		
Fever, Scarlet	3	Casualties	10

Decrease of Burials, as compared with the preceding week . . 188

METEOROLOGICAL JOURNAL.

March.	Thermometer.		Barometer.	
Thursday . 16	from 31	to 42	29·99	to 30·05
Friday . . 17	31	41	30·17	30·19
Saturday . 18	31	44	30·17	30·02
Sunday . . 19	24	41	29·99	29·91
Monday . . 20	24	37	29·87	29·86
Tuesday . . 21	17	37	29·86	29·72
Wednesday 22	22	39	29·71	29·70

Prevailing winds N.E.

Except the morning of the 19th, 21st, and evening of the 20th; generally cloudy, rain on the 16th and 17th; snow on 20th and two following days, and remarkably cold.

Rain fallen, ·025 of an inch.

NOTICES.

A correspondent requests us to inquire of Mr. Hunt, of Dartmouth, who contributed the interesting case of "death of the fœtus from twisting of the funis round the neck," in last Gazette, whether he noticed the state of the integuments of the neck, as to their being ecchymosed or not? Also, whether he examined the condition of the subcutaneous parts? Information on these points would certainly render the case, in a medico-legal point of view, far more valuable than it can possibly be in its present shape.

"Chirurgus Rusticus" in our next.

Wilson & Son, Printers, 57, Skinner-St. London

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A LETTER,

ADDRESSED TO

DR JOHNSON,

EDITOR OF THE LONDON MEDICO CHIRURGICAL REVIEW;

BY

DR HAMILTON,

PROFESSOR OF MEDICINE, MIDWIFERY, &C., IN THE UNIVERSITY OF EDINBURGH.

SIR,—It was only on the 26th of October that I saw the number of your Medico Chirurgical Review for July, which contains a critique on the First Part of my Practical Observations. Had that article appeared in an anonymous publication I should certainly have paid no attention to it, but coming out under the sanction of your respectable name, I fear that certain observations, dispersed through the review, may mislead inexperienced practitioners, and impair my usefulness to the public, and to the profession, which is the great object I have had in view in the publication. I feel myself, therefore, called upon to address you on the subject.

It may be necessary to premise, that although I hold you to be legally and morally responsible for every article in your quarterly work, I do not believe that you are personally the author of the review of which I have reason to complain. I presume that, since you do not practise midwifery, you apply to some gentleman engaged in that profession for critical remarks on books in that department.

Under this impression I shall take the liberty, in the observations I have to offer, to address myself to the reviewer, but before doing so, I must explain what, in my opinion, you, as editor, ought to have required from any one whom you might have employed to review a work such as mine.

My object in the publication of that work, as explicitly stated in the advertisement, is *to record those deviations from the established modes of practice in midwifery, which the experience of nearly half a century has led me to adopt and to recommend.*

The deviations alluded to were originally occasioned by frequent disappointment in the efficacy of the established means—subsequently they were suggested by reasoning—and finally, their utility has been confirmed, not only by my own experience, but also by that of many talented individuals in different parts of the world. Accordingly, in the work reviewed in your publication, I have candidly explained this progress, shewing the inefficacy of the ordinary practice, stating the reasoning which led to the deviations I had adopted, and illustrating the utility of such deviations by an appeal to acknowledged facts, or by a detail of cases.

In reviewing a work of that description, it must be evident, that the person employed to do so, if his intentions were upright, should consider the doctrines of the author only in two points of view, viz., in reference to the utility of the old established practice, or to the reasoning on which the deviations recommended had been founded. As the facts and cases in illustration are recorded upon the solemn

testimony of the author, their accuracy cannot be questioned unless it can be proved that he is either incompetent to understand them, or that he has wilfully misrepresented them; and I venture to believe that the reviewer dare not bring forward such an allegation.

After I shall have shewn what your reviewer has actually done, I shall leave you to judge whether he has been guided by such obvious and upright rules of conduct.

I.—In page 41, the reviewer has called in question a fact which is so well known in this city, that it must excite surprise here that any practitioner should be ignorant of it, viz., that the most certain method of distinguishing dropsy of the ovarium from ascites, is by tapping. In the former disease, the fluid drawn off is ropy and gelatinous, and after the operation, the collapsed sac can be as plainly distinguished through the parietes of the abdomen, as the collapsed uterus after child-bearing.

These facts must be familiar to every surgeon's pupil in large hospitals, and the reviewer may have an opportunity, if residing in London, of verifying them every week.

But although these facts be obvious, and, notwithstanding the scepticism of the reviewer, be incontrovertible, their practical importance can only be appreciated by those who witness the anomalous and complicated cases of disease which not unfrequently occur. For example, above fourteen years ago, an individual was subjected for several weeks to a severe course of mercury and foxglove, in the belief that she laboured under ascites. When I was called in I directed tapping, and, by the marks alluded to, I convinced her medical attendants that her disease was ovarian. She was treated accordingly, and is now alive and in good health. Will the reviewer allege, that if the nature of the case had not been ascertained, this fortunate result could have happened? Would it afford him any satisfaction to prevent this fact from being believed and appreciated by young practitioners?

II.—The next remark I have to offer relates to what is contained in your 43d page. The reviewer says, "He (meaning Dr Hamilton) admits that in some pregnant women there may be periodical bloody discharges from the vagina; but he qualifies this admission by stating, that there is always an irregularity in the date of the recurrence," &c. In the 137th page of my work, there is the following strong denial of my belief in the possibility of "*periodical* bloody discharges during pregnancy."

"That, in some individuals a flow of blood is directed to the uterine arteries, during the first months of pregnancy, exactly at the regular periods of menstruation, indicated by a bloody discharge per vaginam, has been often alleged, but it does not consist with the experience of the author, that there ever was, strictly speaking, such an occurrence."

Not satisfied with having suppressed this passage, the reviewer has thought fit to substitute a different word for that which I had used, and

in making this substitution, he has selected a word which not only misrepresents my opinion, but also renders the sentence ludicrous. How can periodical bloody discharges take place, if "there be an irregularity in the date of the recurrence?" The reviewer has substituted *periodical* for IRREGULAR, which is my expression.

III.—The next remark of the reviewer, to which I must advert, relates to the change on the mammæ, in consequence of impregnation. The reviewer says, "Our own experience, and, we may add, that of almost all the latest and best writers on Midwifery, and on Medical Jurisprudence, do not certainly warrant, that unqualified and unequivocal reliance on the changes of the areola, as a sign of early pregnancy, which Dr H. puts in them."

With every respect for writers on Medical Jurisprudence, I certainly cannot bow to their authority on a practical point of this nature, and so far from "all the latest writers on Midwifery" disregarding this test, one of the latest

and best writers, Dr Montgomery of Dublin, has described this change round the nipple with a degree of minuteness which could only be suggested by truth, and has expressed himself in regard to the value of this test, in as strong language as I could have done. He says, "There is, however, one of those changes which, if carefully observed, is of the utmost value as an evidence of pregnancy, which, according to our experience, can alone produce it—we allude to the altered condition of the areola."

After noticing and quoting the authority of Roederer on this subject, he proceeds,—"The several circumstances here enumerated at least ought, in all cases, to form distinct subjects of consideration, when we propose to avail ourselves of the condition of this part as an indication of the existence or absence of pregnancy. One other we shall add as equally constant, which is a soft and moist state of the integument, which, together with its altered colour, gives us the idea of a part in which there is

going forward a greater degree of vital action than is in operation around it; and we not unfrequently find that the little glandular follicles are bedewed with a secretion sufficient to damp and colour the woman's inner dress. We must recollect, also, that these changes do not take place immediately after conception, but occur in different persons after uncertain intervals; we must therefore consider, in the *first* place, the period of pregnancy at which we may expect to gain any useful information from the condition of the areola."

"We cannot speak very positively as to what may be the earliest period at which this change can be observed, but we have certainly been satisfied of its existence at the end of the second month, at which period the change of colour is by no means the most distinct character to be observed, but the turgescence of the nipple, and the development of the little glandular follicles, are the objects which should principally engage our attention;—the colour at this period being, in general, little more

than a deeper shade of rose or flesh colour, slightly tinged with a yellowish or brownish hue. During the progress of the next two months, the changes in the areola are, in general, perfected, or nearly so; and it then presents the following character :—A circle around the nipple, whose colour varies in intensity according to the peculiar complexion of the individual, being generally much darker in persons with black hair, dark eyes and sallow skins, than in those of fair hair, light coloured eyes, and delicate complexions. The extent of this circle varies from a diameter of an inch to an inch and a half, and increases in some, as pregnancy advances, as does also the depth of colour."

" In the centre of this circle, the nipple is observed partaking of the altered colour of the part, and appearing turgid and prominent; and the part of the areola more immediately around the base of the nipple has its surface rendered unequal by the prominence of the glandular follicles, which, varying in number from twelve

to twenty, project from the sixteenth to the eighth of an inch; and lastly, the integument covering the part is observed to be softer, and more moist than that which surrounds it, and the breasts themselves are, at the same time, observed to be full and firm, at least more so than was natural to the person previously. Such we believe to be the essential character of the true areola, the result of pregnancy, and that, when found possessing these distinctive marks, it ought to be looked on as the result of that condition alone, no other cause being capable of producing it.

Dr Montgomery and I have taken our description of these phenomena from actual observation. We agree accurately in the main points. But I readily admit that his description is more minute and particular than mine. When I published my First Part, I had not seen Dr Montgomery's Observations on the Signs of Pregnancy; but when I did see them, I wrote to the Doctor, that I should in fu-

ture add his description of the areola to my own. *

The importance of establishing the reality of this curious change on the mammæ, which Dr Montgomery has so well described, may be best understood by considering a not unfrequent case.

It is well known that practitioners are sometimes called to cases where unmarried women of good character have been obstructed for some months. No prudent person would venture to prescribe in such cases, without endeavouring to ascertain whether the young woman might not be pregnant. Suppose the symptoms to be equivocal, would the reviewer propose to apply the stethoscope to the naked belly of the woman? He may be assured that, in this part of the world at least, such a proposal would be indignantly rejected by

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* *Vide* Cyclopædia of Practical Medicine, vol. iii., page 473.

every young woman of reputed respectability. But if, by obtaining permission to look at one of the mammæ, he could, by the state of the areola, determine the nature of the case, would not this be a matter of great importance?

Admitting that early pregnancy may be discovered by mediate auscultation, the knowledge of this circumstance can very seldom be applied to practical purposes; for, if an unmarried woman be conscious that she may be pregnant, she could so act with the muscles of the belly or limbs as to prevent the stethoscope indicating the condition of the uterus.

IV.—In allusion to my directions for the treatment of a particular cause of protraction of the first stage of labour, the reviewer has expressed himself in the following terms, page 47:—"The treatment which Dr H. recommends in such a case, consists in drawing blood, if the state of the patient will permit, in exhibiting an opiate enema; and after this, in introducing the finger above the stricture,

and in pressing from within outwards on the resisting band of the uterus during each successive pain."

" The last clause of the Professor's advice must be acted upon with great circumspection and gentleness. We are great enemies to all unnecessary manual interference in the management of labour, and we should be rather unwilling to carry the finger within the cervix uteri, above the seat of the stricture, for the purpose of pressing upon it from within." " We prefer the method recommended by Dr Burns, of making the pressure merely on the anterior edge of the os uteri, as already explained in an extract given above."

Dr Burns has not alluded to that rare deviation in the phenomena of the first stage of labour, where an undeveloped band of the cervix uteri prevents the dilatation of the orifice, and therefore it is not correct to appeal to his authority. If Dr Burns were called to such a case in real practice, he would have too much good sense

to apply the pressure to the outer edge of the os uteri, for the resistance to be overcome is generally almost an inch above that part.

V.—The next subject in which I must express my strong sense of the want of candour of the reviewer, is in the following words, page 48.—" We wish that we could with propriety say as much for the succeeding chapter on the management of the second stage. Thirty pages of print to be occupied with recommending the accoucheur to apply his naked (without a napkin) hand to the perinæum, when the head is pressing down, and to smear the parts with soft lard. In truth, this is the sum and substance of the whole chapter."

Perhaps it would be difficult to find in the annals of medical criticism, a more uncandid and unfounded assertion than that contained in this sentence. My directions for the management of the second stage of labour are comprised in *twenty-seven lines* instead of thirty pages. But I felt it necessary, in order to

explain my own practice, to allude to that of others, and I have in consequence been obliged to quote the directions of Dr Denman, of Dr Davis, of Professor Burns, of Mons. Baudelocque, and of Mons. Velpeau, for it would have been a very unsatisfactory method of recommending my own practice to the adoption of young practitioners, if I had summarily stated that the practice of all those gentlemen is, in my opinion, both erroneous and dangerous.

These quotations may appear prolix to the reviewer, as he may be familiar with the works in question, but young practitioners, and especially those who do not reside in large cities, cannot be expected to have access to those works.

Besides the twenty-seven lines of directions, I have added four or five pages of illustration, which it is probable the reviewer never read.

So far from my directions being confined to supporting the perinæum with the naked hand,

and smearing the parts with soft lard, my very first direction is one which I suspect is seldom steadily pursued. It is in the following words: —"From the time that the head of the infant clears the os uteri, the practitioner is to remain by the patient."

Of the importance of this precept, no better illustration can be given than the records of the cases in the Dublin Lying-in Hospital, inserted in Dr Collins's valuable publication. Will the reviewer venture to allege, that if that rule had been adopted the following case (which I have selected out of several similar ones, chiefly on account of its brevity), could have happened?

"No. 526 (Collins, p. 470) was reported to have been twenty-four hours in labour before admission. About twelve hours after she came in, it was discovered that the face was turned towards the pubes, and pressing so strongly on the urethra, the catheter could with difficulty be passed. The pains continued strong for

fifteen hours from this time, yet the head did not advance. It was found advisable to lessen it." Now, I ask the reviewer if any practitioner of common humanity could have sat witnessing for twenty-seven hours the unavailing sufferings and tortures of a poor woman? The narrative clearly proves that she had only been visited occasionally.

The next direction is very summarily stated, occupying nine lines, which is probably the reason that its value has been overlooked. It is to make counter pressure on the perinæum, without the intervention of a soft cloth, and the reason urged for this deviation is, that it is obviously impossible to afford the proper support, if a cloth be interposed, a circumstance which had been explained in my remarks upon the practice of Dr Denman and others. In point of fact, every man who has attended to the subject must know, that in order to protect the perinæum, the counter-pressure must be varied, not only in different women, but in the same woman in different labours.

Certainly the reviewer is correct that I advise the use of soft lard for the purpose of promoting the dilatation of the passages—of alleviating the sufferings of the patient—and of preventing subsequent inflammation and swelling of the parts, and I ask him if these are not most important considerations.

But I have inculcated a fourth practice, to which the reviewer has not alluded, and that is, forcing forwards the perinæum towards the pubes during every pain after the head begins to protrude. This practice I have long recommended, from my conviction of its utility, but I am aware that my friend, Professor Burns, entertains a different opinion on this subject.

The truth is, that I was led to give directions for the management of the second stage of natural labour, as I have incidentally stated in my Second Part (page 101), in consequence of the numerous cases on which I have been consulted, both from England and the Continent, where prolapsus uteri had been occasioned by

laceration of the perinæum during labour. I was perfectly aware that selfish or prejudiced practitioners might be unwilling or unable to adopt the means which I recommend for the protection of the perinæum, and that persons anxious to decry the practice of midwifery by medical men, might hold out such directions as indelicate. But I certainly could not have supposed that those directions could have been so misrepresented in a journal edited by a respectable physician.

VI.—The comments which I have hitherto felt it incumbent upon me to offer, have related to important practical points. It remains for me only to advert to the observations of the reviewer in a note, page 50, which I do rather in order to vindicate the truth and accuracy of my own statements, than to shew the *mala fides* of the reviewer, which is so very obvious that it is most wonderful he should have displayed it with so little reserve :—The words to which I allude are these :—" Dr H. says, that in his long ex-

perience he has in no instance found the pulse of the child, before it begins to breathe, to exceed sixty beats in a minute. Of the truth of this he has repeatedly convinced himself by counting the pulsations of the cord, not only while the child was still in utero, but also after its expulsion before respiration commenced. The experience, however, of his friend and coadjutor, Dr Moir, and we need scarcely add, of all other accoucheurs, is directly opposed to the Professor's statements."

Now, I have to state, in the *first* place, that the reviewer has totally forgotten that the professed object of my work is to record my own opinions and discoveries, and therefore, although he and all the rest of the profession were to declare their disbelief of the fact of the slow action of the fœtal heart previous to breathing, I should certainly prefer trusting to the testimony of my own senses, to any appeal to the opinions of others.

Many years have elapsed since I mentioned,

in lecturing, the discrepancy between the action of the fœtal heart previous to breathing, and the action of the heart of the parent, as a curious fact, of which physiologists had not been aware, since it furnishes one of the strongest evidences that there can be no direct vascular communication between the mother and the infant. To my surprise, this fact was, about from ten to fifteen years ago, alluded to in one of the articles in the Dictionaire des Sciences Medicales, which I have no leisure at present to investigate, as the fact is the only matter which your reviewer has been pleased to question.

Secondly, The assertion of the reviewer, that the experience of Dr John Moir is directly opposed to the Professor's statements, is a perversion of a recorded fact, which I shall not stoop to characterize. Dr Moir, in reporting his experiments with the stethoscope, as printed in my Appendix, has thus expressed himself, page 312 :—" This effect of the contractions of the uterus acting indirectly on the

circulation of the fœtus through the medium of the brain, may account *for the fact, that the pulsations of the heart are only about* 60 *in infants who do not breathe on birth,* but in whom the circulation still goes on through the chord."

By this quotation, it is evident that Dr Moir bears testimony to the truth of my account of the action of the fœtal heart before breathing; while your reviewer avers that the experience of Dr Moir is directly *opposed* to the Professor's statements.

Thirdly, After reading Dr Evory Kennedy's Observations on Obstetric Auscultation, I requested Dr Sidey and Dr Moir, both of whom are engaged in very extensive practice here, to attend particularly to this subject, and to endeavour to ascertain the number of pulsations in the umbilical arteries of the fœtus, in cases where they could reach the cord before the birth of the infant, or where the infant did not breathe when born, although the action of the heart continued. On reading your review on

the 26th October, I wrote to those gentlemen, to request them to communicate to me the result of their observations on this subject, and the following are the letters which I received:—

2, Heriot Row, Edinburgh,
27th October 1836.

Dear Sir,—In answer to your note of last night, in regard to the action of the fœtal heart before breathing is established, I beg to state, that since you directed my attention particularly to the subject, I have had an opportunity of ascertaining, in eight cases, that the action of the heart is only sixty or under it in a minute, before the act of respiration is established.

In four of the eight cases, I had to deliver the patient by the operation of turning. During the absence of the labour pains, I had an opportunity of deliberately counting the pulsations of the cord, and of contrasting them with those of the iliac arteries of the mother, which I felt distinctly through the parietes of the uterus. I am, Yours very truly,

(Signed) Charles Sidey.

5, George Street,
26*th October* 1836.

My Dear Sir,—In reply to your letter of this date, I beg leave to say, that till the publication of Dr Evory Kennedy's book on obstetrical auscultation, I considered that the slow action of the fœtal heart in those cases where the infant does not breathe upon birth, though the circulation continues, had been a fact universally acknowledged by the practical part of the profession.

On reading Dr Kennedy's publication, my attention was very particularly directed to this subject, and I can, with great truth, assure you, that my observations since that time have invariably confirmed the fact, that the pulsations of the heart are only about 60 in those cases, as mentioned in my former communication to you, and recorded in the First Part of your work, page 312. I am, dear Sir, yours very truly,

(Signed) John Moir.

2, Heriot Row, Edinburgh,
October 29, 1836.

My Dear Sir,—Since I wrote to you on the 27th, I have had two opportunities of ascertaining the action of the fœtal heart previous to the commencement of breathing. The one occurred last night, and the other this morning.

In the former case, I felt the cord of the infant round its neck whenever the head filled the pelvis, and pressing my finger upon it, I repeatedly counted the pulsations, and I found them to be rather under sixty in the minute.

The infant whom I assisted into the world this morning, did not breathe for some little time, but the arteries of the navel string beat distinctly. The number of pulsations in the minute varied from fifty-six to sixty. I ever am, my dear Sir, yours truly,

(Signed) Charles Sidey.

These observations, will, I trust, satisfactorily expose the misrepresentations of which your reviewer has been guilty, and will enable your readers to determine what degree of credit is due to the animadversions of such a person.

I am,

Sir,

Your obedient Servant,

Jas. Hamilton.

Edinburgh,
8*th November* 1836.